

## Item 1 Cover Page

### **BlackRock Fund Advisors**

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August 28, 2017

This Brochure provides information about the qualifications and business practices of BlackRock Fund Advisors as well as certain other affiliated registered investment adviser subsidiaries (the “Advisers”) of BlackRock, Inc. (together with its subsidiaries, “BlackRock”). If you have any questions about the contents of this Brochure, please contact BlackRock Fund Advisors at the telephone number provided above. The information in this Brochure has not been approved or verified by the United States Securities and Exchange Commission (“SEC”) or by any state securities authority.

BlackRock Fund Advisors is registered as an investment adviser with the SEC. Registration as an investment adviser does not imply any level of skill or training.

Additional information about BlackRock Fund Advisors is available on the SEC’s website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

BlackRock Financial Management, Inc. is registered as an investment adviser with the SEC. Registration as an investment adviser does not imply any level of skill or training.

Additional information about BlackRock Financial Management, Inc. is available on the SEC’s website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

## Item 2 Material Changes

### Material changes from March 31, 2017, through May 15, 2017:

**Item 9: Disciplinary Information.** Updated on May 15, 2017 to disclose that on April 25, 2017, BlackRock Fund Advisors (“BFA”) reached an agreement with the Securities and Exchange Commission resolving a matter regarding whether one BFA managed exchanged traded fund (the iShares MSCI Russia Capped ETF) was covered by certain exemptive relief the SEC previously granted BFA and other iShares exchange traded funds.

### Material changes from May 16, 2017, through August 28, 2017:

**Item 8: Methods of Analysis Investment Strategies and Risk of Loss.** Information regarding index mandates and investment strategy risks have been updated.

**Item 10: Other Financial Industry Activities and Affiliations.** Updated to provide additional information regarding:

- BlackRock, Inc.’s acquisition of the energy infrastructure business of First Reserve Partners, L.P. and First Reserve Management, L.P., which included the acquisition of First Reserve Energy Infrastructure Advisors, L.L.C. and First Reserve Advisors, L.L.C.
- BlackRock, Inc.’s acquisition of Cachematrix Holdings, LLC, and its subsidiaries.
- BlackRock Index Services, LLC, an affiliate of the Advisers, which develops indices against which portfolios are managed.

**Item 11: Code of Ethics, Participation or Interest in Client Transactions and Personal Trading.** Updated to provide additional information regarding:

- Engaging in agency cross transactions.
- BlackRock Index Services, LLC, an affiliated index provider.
- Engaging in principal transactions.

**Item 12: Brokerage Practices.** Information regarding research or brokerage services that can be acquired with client commissions are now disclosed under Use of Commissions.

**Item 15: Custody.** Updated to provide additional information regarding custody of client’s assets.

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## Item 4 Advisory Business

### OVERVIEW OF BLACKROCK REGISTERED INVESTMENT ADVISERS

Each BlackRock entity listed below (individually, an “Adviser”) is registered as an investment adviser with the SEC and is a wholly-owned subsidiary of BlackRock, Inc., a publicly traded company. Although referred to collectively throughout this Brochure as the Advisers, each Adviser is a separate and distinct company that may have differing investment capabilities and functions. The Advisers generally have common policies and procedures with respect to United States (“U.S.”) investment advisory clients and share senior management teams. This Brochure provides an overview of each Adviser listed in the table below:

BlackRock – Advisers	SEC File #	In Business Since <sup>1</sup>	Client Assets Managed* (as of 12/31/2016)		
			Discretionary	Non-Discretionary	Total
BlackRock Financial Management, Inc. (“BFM”)	801-48433	10/21/1994 22 years	628,354,739,022	3,711,764,818	632,066,503,840
BlackRock Advisors, LLC (“BAL”)	801-47710	09/23/1994 22 years	544,848,892,964		544,848,892,964
BlackRock International Limited (“BIL”)	801-51087	10/04/1995 21 years	16,532,028,128		16,532,028,128
BlackRock Capital Management, Inc. (“BCM”)	801-57038	11/19/1999 17 years	71,512,884,471		71,512,884,471
BlackRock Investment Management, LLC (“BIM”)	801-56972	09/28/1999 17 years	223,555,064,218	14,566,390,622**	238,121,454,839
BlackRock Fund Advisors (“BFA”)	801-22609	09/20/1984 32 years	1,097,542,199,162		1,097,542,199,162
BlackRock (Singapore) Limited (“BSL”)	801-76926	12/02/2000 16 years	21,225,736,338		21,225,736,338
BlackRock Asset Management North Asia Limited (“BAMNAL”)	801-77343	08/10/1998 18 years	17,650,493,073		17,650,493,073
BlackRock Asset Management Schweiz AG (“BAMS”)	801-78476	6/17/2005 11 years	5,332,938,229		5,332,938,229

\* The assets reported as Client Assets Managed include only those assets for which each Adviser acts as primary adviser, and excludes assets for which the Adviser (i) has delegated all discretionary investment advisory authority to another investment advisory and trust company subsidiaries of BlackRock, Inc. (“BlackRock Investment Adviser”) and (ii) is the sub-adviser for a client, if another BlackRock Investment Adviser is the primary adviser. Per the instructions of Form ADV Part 1A, such excluded assets are included in the regulatory assets under management of the each Adviser’s Form ADV Part 1A.

\*\* BIM’s “Non-Discretionary” assets include: \$120.3 billion with respect to which BIM is responsible for making investment recommendations to clients and, if approved by such clients, placing trades in their accounts to implement such recommendations; and \$14.4 billion with respect to which BIM provides investment services (in the form of model portfolios) to third party investment managers and such managers are responsible for placing trades in their client accounts based on such model portfolios (please see Item 4 (“Advisory Business”) of this Brochure for more information on BIM’s participation in such “Model-Based SMA Programs”).

### ADVISORY SERVICES

As part of their investment management services, the Advisers collectively offer a range of investment solutions from fundamental and quantitative active management to indexing strategies designed to gain broad exposure to the world’s capital markets. Each Adviser generally provides investment management services in accordance with applicable investment guidelines and restrictions, including applicable restrictions on investing in certain securities, or types of securities or other financial instruments, that are developed in consultation with the client, or in accordance with the mandate selected by the client (e.g., fixed income, cash management, equity, alternative, index or multi-asset). Each pooled investment vehicle managed or otherwise advised by an Adviser (e.g., U.S. registered investment companies, exchange traded funds (“ETFs”) and private investment funds) is managed in accordance with its

<sup>1</sup> “In Business” is based on each Adviser’s date of incorporation or organization, as appropriate.

investment guidelines and restrictions and generally is not tailored to the individualized needs of any particular fund shareholder or fund investor, and an investment in such a vehicle does not, in and of itself, create an advisory relationship between the shareholder or investor and an Adviser. The Advisers use both automated and/or manual processes to manage portfolios in accordance with their stated portfolio investment guidelines and restrictions.

An overview of each Adviser and its primary focus is provided in the table below:

<b>BlackRock - Advisers</b>	<b>Primary Focus</b>
BFM	Manages assets for institutional and high net worth clients, separate accounts, pooled investment vehicles, private investment funds and U.S. registered investment companies. Mandates include equity, fixed income, alternative, multi-asset and quantitative equity strategies.
BAL	Manages assets for U.S. registered investment companies and 529 Plans. Mandates include cash management, equity, fixed income, alternative, multi-asset and quantitative equity strategies.
BIL <sup>2</sup>	Manages assets for institutional clients, separate accounts, pooled investment vehicles and U.S. registered investment companies, including ETFs. Mandates include equity, fixed income and multi-asset strategies.
BCM	Manages assets for institutional and high net worth clients, separate accounts, pooled investment vehicles, private investment funds, and U.S. registered investment companies. Mandates include cash management, fixed income and equity strategies.
BIM	Manages assets for institutional and high net worth clients, separate accounts, pooled investment vehicles and U.S. registered investment companies. Also sponsors a separately managed account ("wrap fee") program. Mandates include equity, fixed income, alternative and multi-asset strategies.
BFA	Manages assets for U.S. registered investment companies, including ETFs. Mandates include cash management, equity, fixed income, multi-asset and index strategies.
BSL <sup>3</sup>	Manages assets for institutional clients, pooled investment vehicles and U.S. registered investment companies. Mandates include fixed income and equity strategies.
BAMNAL <sup>4</sup>	Manages assets for institutional clients, pooled investment vehicles and U.S. registered investment companies, including ETFs. Mandates include equity and real estate strategies. Also provides real estate related investment services, which are principally related to the acquisition, disposition and supervision of management and improvement of real estate investments.
BAMS <sup>5</sup>	Manages assets for institutional clients, pooled investment vehicles and separate accounts. Mandates include fixed income, private equity and infrastructure strategies. Also engages in distribution activity in relation to non-U.S. domiciled collective investment schemes, as well as U.S. and non-U.S. ETFs.

The Advisers' investment management services are offered (directly or indirectly through a sub-advisory arrangement with the client's primary investment adviser) to registered investment companies, single-investor funds, discretionary and non-discretionary advisory programs, commingled investment vehicles, and individuals and institutional investors through separate account management. The types of clients to which each Adviser provides investment management services are disclosed in each Adviser's Form ADV Part 1 and summarized in Item 7 ("Types of Clients") of this Brochure.

<sup>2</sup> BIL is located in the United Kingdom and authorized by the Financial Conduct Authority of the United Kingdom. In some cases, laws, rules and regulations applicable to BIL differ from those described generally herein. In such cases, BIL has separate policies and procedures in support of such laws, rules and regulations.

<sup>3</sup> BSL is located in Singapore and licensed by the Monetary Authority of Singapore. In some cases, laws, rules and regulations applicable to BSL differ from those described generally herein. In such cases, BSL has separate policies and procedures in support of such laws, rules and regulations.

<sup>4</sup> BAMNAL is located in Hong Kong and licensed by the Securities and Futures Commission and Mandatory Provident Fund Schemes Authority of Hong Kong. In some cases, laws, rules and regulations applicable to BAMNAL differ from those described generally herein. In such cases, BAMNAL has separate policies and procedures in support of such laws, rules and regulations.

<sup>5</sup> BAMS is located in Switzerland and authorized as a management company with the Swiss Financial Market Supervisory Authority. In some cases, laws, rules and regulations applicable to BAMS differ from those described generally herein. In such cases, BAMS has separate policies and procedures in support of such laws, rules and regulations.



Depending on the investment strategy or strategies that a client wishes to pursue, the client's ultimate contractual relationship may be with one or more of the Advisers. For example, a client that engages an Adviser to perform U.S. fixed income and non-U.S. equity investment services can have two contractual relationships, one with BFM and one with BIL.

### ***Institutional Separate Accounts and Separately Managed Accounts***

Certain Advisers provide investment management services directly to institutional and high net worth clients through separately managed accounts.

Institutional clients typically retain an Adviser to manage their accounts pursuant to a negotiated investment management agreement ("IMA") between the Adviser and the client. As part of their institutional separate account business, the Advisers have developed many investment strategies to meet individual client risk profiles. The Advisers' institutional fixed income strategies span the yield curve and incorporate the expertise of various U.S. and non-U.S. sector specialists. The guidelines for each client's fixed income strategy are tailored to reflect the client's particular investment needs with respect to interest rate exposure, sector allocation, and credit quality. The Advisers' cash management strategies typically emphasize quality and liquidity. The Advisers offer both U.S. and non-U.S. equity investment strategies to institutional clients using a variety of investment styles, including growth, value, core and enhanced equity, that are targeted to specific market capitalization ranges, including small-cap, mid-cap, small/mid-cap, large-cap and all-cap, as well as geographic and industry sectors which can be tailored to meet the specific needs of clients. The Advisers also offer alternative asset and multi-asset separate account strategies to institutional clients, including strategies that permit the Advisers to allocate all or a portion of the portfolio management to non-affiliated investment advisers selected by the Advisers.

High net worth clients can retain an Adviser to manage their accounts by participating in a separately managed account ("SMA") or "wrap fee" program sponsored either by the Adviser or by a third party investment-adviser, broker-dealer or other financial services firm (the "Sponsor"). Depending on the structure of the program, an SMA program client enters into an investment advisory agreement with the Adviser and/or the third party Sponsor. BIM sponsors the Private Investors Service ("Private Investors") a SMA or wrap fee program. Through Private Investors, BIM offers a variety of equity, fixed income, and multi-asset investment strategies to clients generally referred by Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") pursuant to a solicitation arrangement between BIM and MLPF&S which is described in Item 14 ("Client Referrals and Other Compensation") of this Brochure. Additional information about Private Investors is available through its disclosure document (the "Private Investors Brochure"), which is available to current and prospective Private Investors clients. As the sponsor of Private Investors, BIM provides Private Investors clients with the Private Investors Brochure.

BIM also participates as an investment manager in SMA programs sponsored by third party Sponsors, including in certain cases where BIM acts as sub-adviser to clients who authorize their investment advisers to retain BIM (directly or indirectly) to act as a discretionary investment manager. The SMA programs in which BIM currently participates are identified in BIM's Form ADV Part 1. BIM requires a minimum account size for certain of its investment strategies, which varies among SMA programs. In most SMA programs, the Sponsor is responsible for establishing the financial circumstances, investment objectives, and investment restrictions applicable to each client, often through a client profile (the "Profile") and discussions between the client and the Sponsor's personnel. Each client typically completes a Profile in addition to executing a program contract with the Sponsor. In some SMA programs (often referred to as "Dual Contract SMA Programs"), clients are required to execute a separate agreement directly with each investment manager (such as BIM) or the investment manager is made a party to the client/Sponsor agreement. The client's program agreement with the Sponsor generally sets forth the services to be provided to the client by or on behalf of the Sponsor, which can include, among other things: (i) manager selection; (ii) trade execution, often without a transaction-specific commission or charge; (iii) custodial services; (iv) periodic monitoring of investment managers; and (v) performance reporting. Clients typically are charged by the Sponsor quarterly, in advance or in arrears, a comprehensive or wrap fee based upon a percentage of the value of the assets under management to cover such services. The wrap fee often, but not always, includes the advisory fees charged by BIM (or other participating managers) through the program. Where the services provided by BIM (or other participating manager) are included in the wrap fee, the Sponsor generally collects the wrap fee from the client and remits the advisory fee to BIM (or other participating manager). In Dual Contract SMA Programs, the investment manager's fee typically is paid directly by the client pursuant to a separate agreement between the investment manager and the client.



SMA program clients also are subject to additional fees, expenses, and charges (e.g., commissions on transactions executed by a broker-dealer other than the Sponsor or the program's designated broker-dealer(s), expenses with respect to investments in pooled vehicles (such as ETFs and money market and other registered investment companies), dealer mark-ups or mark-downs on principal transactions, and certain costs or charges imposed by the Sponsor or a third-party, such as odd-lot differentials, exchange fees, and transfer taxes mandated by law). Generally, Sponsors are responsible for providing clients with both this Brochure and other applicable brochures for the Sponsor's program (the "Program Brochure"). The Program Brochure for each Sponsor is also available through the SEC's Investment Adviser Public Disclosure website. SMA program clients should review the Sponsor's Program Brochure for further details about the relevant program. Such clients should consider that, depending upon the rate of the wrap fee charged, the amount of trading activity, the value of custodial and other services provided and other factors, the wrap fee could exceed the aggregate costs of the services provided if they were to be obtained separately (although, in some cases, it is possible to obtain such services only through the program) and, with respect to brokerage, any transaction-based commissions paid by the account. BIM is not responsible for, and does not attempt to determine, whether a particular third-party SMA program is suitable or advisable for program participants. BIM reserves the right, in its sole discretion, to reject any account referred to it by a Sponsor for any reason, including, but not limited to, the client's stated investment goals and restrictions.

BIM's fees for managing SMA program accounts can be less than the fees it receives for managing similar accounts outside of an SMA program. However, clients should be aware that, as discussed above, the total fees and expenses associated with an SMA program can exceed those available if the services were acquired separately.

An institutional client typically consults with an Adviser at the outset of the Adviser-client relationship to establish customized investment guidelines applicable to the Adviser's management of the client's account, and such guidelines often vary significantly among institutional accounts with the same investment objective. An SMA program client typically selects (in its program agreement) an investment strategy for BIM to utilize in connection with its management of the client's account (e.g., U.S. large-cap equity, U.S. short-term taxable fixed income). As discussed in Item 8 ("Methods of Analysis, Investment Strategies and Risk of Loss") of this Brochure, SMA program accounts following the same investment strategy typically are managed by BIM in accordance with a "target portfolio" (for equity securities) or "model guidelines" (for fixed income securities), subject to any reasonable investment restrictions imposed by clients. Therefore, SMA program accounts following the same investment strategy typically hold the same or similar securities. In addition, BIM typically effects equity transactions for SMA program accounts with the program's designated broker-dealer, whereas an Adviser usually effects equity transactions for institutional accounts with a variety of broker-dealers. For additional information please refer to Item 12 ("Brokerage Practices") of this Brochure.

Certain investment strategies offered in some SMA programs invest in securities that are not traded in U.S. markets. As a result, certain securities are subject to state or territory registration requirements. If a security BIM wishes to purchase for such an SMA program account is not registered or exempt from registration in a particular state or territory, applicable regulatory requirements can restrict the purchase of that security for residents of that state or territory, which could affect portfolio composition, diversification and performance.

In certain SMA programs (referred to below as "Model-Based SMA Programs"), BIM provides non-discretionary investment services (often in the form of model portfolios) to an overlay portfolio manager ("OPM") retained by the Sponsor which may utilize BIM's model portfolios in connection with its management of client accounts. Generally it is only the OPM, and not BIM, which acts as investment adviser to program clients, and in most of the Model-Based SMA Programs in which BIM participates, the OPM, and not BIM, is responsible for implementing trades in client accounts. In most of the Model-Based SMA Programs in which BIM participates, clients are able to designate the particular model portfolios to be utilized by the OPM in managing their accounts, the OPM typically implements BIM's model portfolios (subject only to account-specific restrictions imposed by clients), and the fees payable to BIM for providing such model portfolios typically are paid by the Sponsor or OPM based on the amount of their clients' assets that are managed by the OPM. BIM generally includes such assets in its Non-Discretionary Client Assets Managed set forth above in the table under "Overview of BlackRock Registered Investment Advisers" in this Item 4 ("Advisory Business") of this Brochure. The Model-Based SMA Programs to which BIM currently provides model portfolios are identified in BIM's Form ADV Part 1.

## SERVICES OF AFFILIATES

BlackRock, Inc. operates its investment management business through the Advisers, as well as through multiple affiliates, some which are also investment advisers registered through the SEC, one of which is a limited purpose national banking association chartered by the U.S. Department of Treasury's Office of the Comptroller of the Currency, and some of which are registered only with non-U.S. regulatory authorities and some of which are registered with multiple regulatory authorities. The Advisers use the services of affiliates which are broker-dealers registered under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and members of the Financial Industry Regulatory Authority ("FINRA"), as needed. For additional information, please refer to Item 10 ("Other Financial Industry Activities and Affiliations") and Item 12 ("Brokerage Practices") of this Brochure. The Advisers use the services of one or more BlackRock, Inc. subsidiaries or appropriate personnel of one or more BlackRock, Inc. subsidiaries for investment advice, portfolio execution and trading, operational support, and client servicing in their local or regional markets or their areas of special expertise without specific consent by the client, except to the extent explicitly restricted by the client in or pursuant to its IMA, or inconsistent with applicable law. Arrangements among affiliates take a variety of forms, including but not limited to dual employee, delegation, participating affiliate, sub-advisory, sub-agency, or other servicing agreements. This practice is designed to make BlackRock's global capabilities available to an Adviser's clients in as seamless a manner as practical within a varying global regulatory framework. In these circumstances, the Adviser with which the client has its IMA remains fully responsible for the account from a legal and contractual perspective. No additional fees are charged for the affiliates' services except as set forth in the IMA.

## Item 5 Fees and Compensation

### ADVISORY FEES

An Adviser's fees generally depend on the services being provided. For investment management services, fees typically are expressed as a percentage of assets under management. For transition management ("TRIM") services, fees typically are earned through trading commissions paid to an affiliated broker-dealer, but in some cases are expressed as a percentage of net assets under management, a flat-fee agreed upon with a TRIM client, or as a combination of such fees. Fee arrangements vary by client, and are based on a number of different factors, including investment mandate, services performed, and account/relationship size. To the extent permitted under the Investment Advisers Act of 1940, as amended (the "Advisers Act"), or the applicable provisions of the Investment Company Act of 1940, as amended (the "Investment Company Act"), in the case of investment companies registered under the Investment Company Act and advised or sub-advised by an Adviser ("US Registered Funds"), Advisers negotiate and charge performance fees or special allocations, as well as asset-based fees. Additional information about US Registered Funds is provided in Item 7 ("Types of Clients") of this Brochure. In addition, fees and allocations are often fixed, fixed plus performance, or performance only. Certain fixed fees are required to be paid up front. For an additional discussion of performance-based fees and allocations, please refer to Item 6 ("Performance-Based Fees and Side-by-Side Management") of this Brochure.

### FEE SCHEDULES

The following sets forth a basic description of certain advisory fee arrangements. Information on the Advisers' standard fee schedules for Private Investors and Dual Contract SMA Programs are noted below. However, fees and other compensation are negotiated in certain circumstances, and arrangements with particular clients vary.

#### ***US Registered Funds***

With respect to US Registered Funds, each US Registered Fund's prospectus sets forth the applicable fees and expenses.

#### ***Private Funds***

With respect to unregistered pooled investment vehicles advised by an Adviser (each a "Private Fund"), the applicable fees and expenses are set forth in the Private Fund's IMA, subscription agreement and/or other governing documents, or the Private Fund's Offering Memorandum (together with any supplements thereto, the "OM"), if the Private Fund has issued an OM. In certain cases, an Adviser manages a separate account with an investment mandate similar to certain Private Fund, in which case the fees charged to such an account (including performance fees) are not necessarily identical to those of the similar Private Fund.

#### ***Institutional Separate Accounts***

An Adviser's fees for managing an institutional separate account are determined through negotiation with each client and are set forth in the Adviser's IMA with the client. The Adviser's fee may not cover the client's pro rata share of the fees, expenses and/or transaction charges incurred by any mutual fund, ETF or other pooled investment vehicles (including funds or vehicles managed by an Adviser) in which the account invests, although when BIM invests an account in a US Registered Fund, the fee paid by clients can be reduced by the account's pro-rata share of any management fees paid by the US Registered Fund to BlackRock (and any fees paid pursuant to Rule 12b-1 of the Investment Company Act) as a result of such investment.

#### ***Private Investors Accounts<sup>6</sup>***

Private Investors' clients who select equity investment strategies choose either a wrap fee arrangement, where brokerage commissions related to agency equity security transactions executed by MLPF&S generally are included in the Private Investors fee (the "Wrap Fee Option"), or a "standard fee" arrangement, under which clients pay brokerage commissions associated with agency equity security transactions executed on their behalf in addition to the Private Investors fee (the "Standard Fee Option"). Although the applicable Private Investors fee varies between

<sup>6</sup> Private Investors is an SMA or wrap fee program sponsored by BIM. Please see Item 4 ("Institutional Separate Accounts and Separately Managed Accounts") of this Brochure for more information.

the two options, in either case, and in the case of a fixed income investment strategy, the Private Investors fee typically is based on a percentage of a client's assets under management at market value on the appraisal date. For certain accounts, the Private Investors fee is reduced in connection with investments in US Registered Funds, which is described in more detail in Item 11 ("Code of Ethics, Participation or Interest in Client Transactions and Personal Trading") of this Brochure. Clients generally have the ability to negotiate the Private Investors fee applicable to their accounts with their MLPF&S Financial Advisor or BIM.

The Private Investors fee includes investment management by BIM, performance reporting and, if requested by the client, assistance in reviewing investment objectives and selecting an investment strategy. Custodial and other account-related fees charged by the custodian typically are not included in the Private Investors fee and will be charged to Private Investors accounts separately by the custodian. If a client chooses the Wrap Fee Option, the Private Investors fee also includes most execution charges for equity security transactions executed through MLPF&S. The Private Investors fee does not cover transaction charges on trades effected through or with a broker-dealer other than MLPF&S (or its affiliates), mark-ups or mark-downs by such other broker-dealers, transfer taxes, margin interest, exchange or similar fees (such as for American Depositary Receipts – "ADRs") charged by third parties including issuers and the SEC, electronic fund, wire and any other account transfer fees, and any other charges imposed by law or otherwise agreed to with respect to the account. In addition, and as discussed further under "BlackRock's Registered Investment Companies, Private Funds and Other Investment Products" in Item 11 ("Code of Ethics, Participation or Interest in Client Transactions and Personal Trading") of this Brochure, the Private Investors fee does not cover the client's pro rata share of the fees, expenses and/or transaction charges incurred by any mutual fund, ETF or other pooled investment vehicles (including funds or vehicles managed by an Adviser) in which the account invests, although when BIM invests a Private Investors account in a US Registered Fund, the Private Investors fee paid by clients will be reduced by the Private Investors account's pro-rata share of any management fees paid by the US Registered Fund to BlackRock (and any fees paid pursuant to Rule 12b-1 of the Investment Company Act) as a result of such investment. However, there is certain compensation received by BlackRock for providing other services to US Registered Funds (such as shareholder servicing and other administrative services) that is not used to reduce the Private Investors fee, and therefore such compensation to BlackRock is separate from and in addition to the Private Investors fee. Additionally, certain US Registered Funds in which BIM may invest Private Investors accounts, such as US Registered Funds specifically intended for SMA programs such as Private Investors, do not charge management fees (or their fees are waived or reimbursed by the Fund's investment manager), and/or are only eligible for investment by separate accounts managed by BlackRock (such as Private Investors accounts) ("Management Fee-Waived Mutual Funds"). Such Management Fee-Waived Mutual Fund shares will be redeemed upon the termination of BlackRock's management.

Clients will pay the public offering price on securities purchased from an underwriter or dealer involved in a distribution. In certain instances, when MLPF&S executes transactions in foreign ordinary securities outside of the US, it may use the services of foreign firms, which either handle a client's order as agent and assess a commission charge, or transact as principal and receive a dealer spread or mark-up/down. Additionally, to the extent a foreign currency conversion transaction is required to facilitate trade settlement, the foreign firm effecting the currency conversion will be remunerated in the form of a dealer spread or mark-up/down. The commission charges and/or dealer spreads of other broker-dealers can also accrue when foreign issuers terminate an ADR facility, thereby necessitating conversion of ADRs to foreign ordinary share form. In such circumstances, there is the potential for the price obtained for the post-ADR security to be less beneficial to clients than if the ADR remained intact. The foregoing commission charges and/or dealer spreads associated with transactions in foreign securities are factored into the net price for such securities and are not included in the Private Investors fee.

Because of factors bearing on cost, such as fees which differ based on the value of the assets held in a Private Investors account, the number and type of transactions effected for an account and the fee option that a client selects, a client's costs for participating in Private Investors can be more or less than the cost of purchasing the services offered through Private Investors separately. In addition, selection of the Wrap Fee Option potentially could result in a higher or lower cost to the client than had the client selected the Standard Fee Option (and paid commissions on agency equity security transactions), depending on the level of trading in the account and the Private Investors fee and brokerage commissions the client would have paid under the Standard Fee Option. Clients should consider the amount of anticipated trading activity and their applicable commission rate when assessing the overall cost of Private Investors and determining which fee option to select. Wrap fees typically assume a normal and

consistent amount of trading activity, and therefore, under particular circumstances, a prolonged period of inactivity can result in higher fees than if commissions were paid separately for each transaction. The Wrap Fee Option could be more economical if active trading is anticipated.

The typical fee schedules for Private Investors are set out below. Fees and minimum account sizes can vary from the fee schedules below and can be negotiated with BIM or the client's MLPF&S Financial Advisor based upon factors that include, but are not limited to: (i) the amount and/or composition of the assets in the client's account; (ii) the number of accounts and/or total amount of assets that the client has with MLPF&S, BIM and/or their affiliates; (iii) the range and extent of services provided to the client; and (iv) whether the client is an employee of BIM, MLPF&S or an affiliate of either firm. Moreover, Private Investors fees, minimum account sizes, and other account requirements also vary as a result of prior policies and the date the relevant account opened, or if account assets are held by custodians other than MLPF&S. Fees and surcharges vary for clients requesting non-discretionary management.

Fees generally are calculated and paid quarterly and in advance of the rendering of services (except as separately negotiated or as otherwise noted herein). Most Private Investors clients elect to pay fees by authorizing their custodian (typically MLPF&S) to pay BIM out of their Private Investors account assets. However, some clients elect to pay fees from outside of the Private Investors account and such clients should note that their IMA with BIM may authorize MLPF&S (or other custodian) to pay the Private Investors fee from the Private Investors account, if full payment has not been timely received by BIM or, if earlier, at the termination of the client's IMA with BIM. In such cases, if money market fund shares or other cash assets in the account(s) are insufficient to pay fees due, BIM can instruct the custodian to sell or liquidate account assets to cover the Private Investors fee. Private Investors accounts generally are subject to a minimum fee, determined by applying the client's fee schedule to the applicable minimum portfolio size. If BIM manages multiple accounts for a client (or a group of related clients), then BIM, at its discretion, can permit the assets of such accounts to be aggregated for purposes of taking advantage of available breakpoints.

The following fee schedules and minimum account sizes generally apply:

### **Wrap Fee Options**

***No commissions will be charged on equity trades executed by MLPF&S***

Available only if client directs that all equity brokerage is to be effected through MLPF&S

### **Equity, Balanced, Retirement Journey and Wealth Diversified Portfolios**

<b>Portfolios</b>	<b>Minimum Portfolio Size</b>
Equity Portfolio	\$250,000
Balanced Portfolio	\$250,000
Balanced with Municipal Fixed Income Portfolio	\$500,000
Retirement Journey Portfolio	\$500,000
<b>Wealth Diversified Portfolio</b>	
Strategic and Tactical with Taxable Fixed Income	\$350,000
Strategic with Municipal Fixed Income	\$500,000
Tactical with Municipal Fixed Income	\$1,000,000

### **Fee Schedule**

<b>Asset Levels</b>	<b>Annual Rate</b>
First \$ 500,000	2.50%
Next \$ 500,000	2.00%
Next \$ 2,000,000	1.50%
Next \$ 7,000,000	1.00%
Next \$40,000,000	0.50%
Value in excess of \$50,000,000	Negotiable

Continue- Wrap Fee Options

**IRC Section 1042 Qualified Replacement Property Investment Portfolios**

This investment strategy is not available for new accounts, and only the Wrap Fee Option is available for this strategy.

Portfolio	Minimum Portfolio Size
IRC Section 1042 Qualified Replacement Property Investment Portfolio	\$1,000,000

**Fee Schedule**

Asset Levels	Annual Rate
First 12 months from the effective date of BIM's appointment as investment manager of the account	1.75%
Thereafter	0.75%

**Standard Fee Options\*****Commissions will be charged on equity trades executed by MLPF&S**

Available only if client directs that all equity brokerage is to be effected through MLPF&S

\*Not available for Retirement Journey Portfolio, Wealth Diversified Portfolios or IRC Section 1042 Qualified Replacement Property Investment Portfolios

**Equity and Balanced Portfolios**

Portfolios	Minimum Portfolio Size
Equity Portfolio	\$1,000,000
Balanced Portfolio	\$1,000,000

**Fee Schedule**

Asset Levels	Annual Rate
First \$ 1,000,000	1.00%
Next \$ 2,000,000	0.75%
Next \$ 7,000,000	0.60%
Next \$40,000,000	0.45%
Value in excess of \$50,000,000	Negotiable

**Fixed Income Portfolios**

Portfolios	Minimum Portfolio Size
Fixed Income Portfolios (unless otherwise stated below):	\$250,000
Global and International Fixed Income Portfolio	\$500,000

**Fee Schedule**

Asset Levels	Annual Rate
First \$ 1,000,000	0.90%
Next \$ 2,000,000	0.75%
Next \$ 2,000,000	0.60%
Next \$ 5,000,000	0.525%
Next \$10,000,000	0.45%
Next \$30,000,000	0.375%
Value in excess of \$50,000,000	Negotiable



Continue- Standard Fee Options

**Multi-Strategy Fixed Income and Target Income Portfolio**

Portfolio	Minimum Portfolio Size
Multi-Strategy Fixed Income and Target Income Portfolio	\$250,000

**Fee Schedule**

Asset Levels	Annual Rate
First \$ 500,000	1.50%
Next \$ 500,000	1.25%
Next \$ 9,000,000	1.05%
Next \$ 5,000,000	1.02%
Next \$ 5,000,000	0.98%
Next \$ 5,000,000	0.95%
Value in excess of \$25,000,000.	Negotiable

**Separately Managed Accounts (Other than Private Investors Accounts)**

As discussed in more detail under “Institutional Separate Accounts and Separately Managed Accounts” in Item 4 (“Advisory Business”) of this Brochure, BIM participates as an investment manager in SMA programs sponsored by various firms (including acting as sub-adviser to clients who authorize their investment adviser to retain BIM to act as a discretionary investment manager). With respect to SMA programs for which BIM is not the Sponsor, the Sponsor’s Program Brochure generally contains information on minimum account sizes and fees payable to the Sponsor and participating investment managers, such as BIM. Accordingly, BIM’s minimum account size and fees can vary from program to program or within a single program based on, among other things, the investment strategies offered by the program. BIM’s fees for managing SMA program accounts may be less than the fees it receives for managing similar accounts outside of an SMA program. However, clients should be aware that, as discussed above, the total fees and expenses associated with an SMA program may exceed those which might be available if the services were acquired separately. Clients should contact their SMA program Sponsor for more information on the fees payable to BIM in connection with such program.

**Dual Contract SMA Program Accounts**

The typical fee schedules applicable to BIM’s participation in Dual Contract SMA Programs are set out below. The minimum account size for Dual Contract SMA Program accounts generally is \$500,000 for an equity account and \$1 million for a fixed income account, although smaller accounts may be accepted at BIM’s discretion. Fees can vary from the fee schedules below and can be negotiated with BIM or the client’s financial advisor based upon factors that include, but are not limited to: (i) the amount and/or composition of the assets in the client’s account; (ii) the number of accounts and/or total amount of assets that the client or its financial advisor has with BlackRock and/or the program Sponsor; (iii) the range and extent of services provided to the client; and (iv) whether the client is an employee of BlackRock or the program Sponsor. Moreover, fees, minimum account sizes and other account requirements vary as a result of prior policies and the date the relevant account opened, or if account assets are custodied at firms other than the Sponsor. Fees and surcharges vary for clients electing non-discretionary management.

Fees generally are calculated and paid on a quarterly basis and in advance of rendering services (except as separately negotiated or as otherwise noted herein). Although most Dual Contract SMA Program clients elect to pay fees by authorizing their custodian to pay BIM out of their account assets, some clients elect to pay fees from outside



of the account. Dual Contract SMA Program accounts generally are subject to a minimum fee, determined by applying the client's fee schedule to the applicable minimum account size. If BIM manages multiple accounts for a client (or group of related clients), BIM, at its discretion, can permit the assets of such accounts to be aggregated for purposes of taking advantage of available breakpoints.

### ***Fixed Income Portfolios***

#### **FEE SCHEDULE**

Asset Levels	Annual Rate
First \$ 1,000,000	0.35%
Next \$ 2,000,000	0.30%
Next \$ 2,000,000	0.25%
Next \$ 5,000,000	0.22%
Next \$10,000,000	0.20%
Assets over \$20,000,000	0.15%

### ***Fixed Income Laddered Strategies***

All Asset Levels	0.14%
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### ***Equity Portfolios***

#### **FEE SCHEDULE**

Asset Levels	Annual Rate
First \$1,000,000	0.65%
Next \$2,000,000	0.60%
Next \$7,000,000	0.45%
Next \$15,000,000	0.40%
Next \$25,000,000	0.35%
Assets over \$50,000,000	0.25%

## **TIMING AND PAYMENT OF ADVISORY FEES**

The timing of fee payments, mutually agreed upon with each client, typically is set forth in the applicable IMA (for a separate account) or in the Private Fund's relevant governing documents and/or the OM, if applicable. Asset-based fees generally are paid monthly, quarterly or semi-annually, and are generally calculated on the value of the account's net assets or, in the case of certain closed-end funds and Private Funds, committed capital, invested capital or the balance of the primary loan to the vehicle. In addition, in certain situations involving due diligence support provided to BlackRock Clients on a non-discretionary basis, clients are charged flat fees depending on the scope of work. Performance fees or other performance-based compensation generally will be based on exceeding specified yield or total return benchmarks or "hurdles" or an appropriate index and generally are payable: (i) on a quarterly or annual basis; (ii) in the case of certain funds that invest primarily in other affiliated or unaffiliated investment vehicles (each, a "Fund of Funds") and other Private Funds (and similarly managed separate accounts), at the time of withdrawal or redemption with respect to the amount withdrawn; and/or (iii) as redeemed or as investments are realized and/or capital is distributed. Certain Private Funds charge performance fees or allocations based on the relevant Private Funds' net profits without regard to any index or performance hurdle. In some cases, these arrangements are subject to a cumulative high water mark or other provisions intended to assure that prior losses are recouped before giving effect to any performance fees or allocations. In other cases, certain Private Funds have periodic or cumulative performance hurdles prior to the Adviser or an affiliate of the Adviser receiving a performance fee or allocation. Clawback or deferral provisions also apply to performance fees paid with respect to certain Private Funds and separate accounts. The timing and amount of performance fees or allocations typically are described in the relevant governing documents and/or the OM, if applicable.

The Advisers' IMAs with clients other than US Registered Funds, collateralized debt obligation funds, collateralized loan obligation funds, certain closed-end funds, Private Funds and funds that invest primarily in other affiliated or unaffiliated investment vehicles ("Funds of Funds") generally do not have termination dates. Rather, IMAs typically are terminated by the Adviser or the client with advance notice, as set forth in the relevant IMA. In the event of the termination of a relationship, unearned fees, if any, beyond agreed-upon minimum fees, paid in advance will be refunded to the client. To the extent fees have been earned but not yet billed, such fees will be pro-rated and paid by the client upon termination. In certain cases (e.g., Private Funds, and separate accounts with performance-based fees), fees continue to be paid after termination of the relationship in accordance with the IMA or OM and/or other governing documents, as applicable.

## OTHER FEES AND EXPENSES

In addition to the fees described above, clients bear certain other costs associated with investments or accounts including but not limited to: (i) custodial charges, brokerage fees, commissions and related costs; (ii) interest expenses; (iii) taxes, duties and other governmental charges; (iv) transfer and registration fees or similar expenses; (v) costs associated with foreign exchange transactions; (vi) other portfolio expenses, including but not limited to index licensing fees; (vii) costs, expenses and fees (including investment advisory and other fees charged by the investment advisers of funds in which the client's account invest) associated with products or services that are necessary or incidental to such investments or accounts and (viii) to the extent negotiated in the IMA, certain of the expenses described in the next paragraph. With respect to certain of the services described in clause (vii), which include, but are not limited to, custodial, securities lending, brokerage, futures, banking, consulting or third-party advisory or legal services, each client is required to establish business relationships with relevant service providers or other counterparties based on the client's own credit standing. BlackRock will not have any obligation to allow its credit to be used in connection with the establishment of such relationships, nor is it expected that such service providers or counterparties will consider or rely on BlackRock's credit in evaluating the client's creditworthiness.

Private Funds also generally bear their own organizational, operating and other expenses including, but not limited to, in addition to those listed above: (i) sales expenses; (ii) legal expenses (which includes expenses incurred in connection with a Private Fund's legal and regulatory compliance with U.S. and non-U.S. laws and regulations (including reporting on and compliance with Form PF), and expenses incurred in connection with complying with provisions in side letter agreements, including "most favored nations" provisions); (iii) internal and external accounting, audit, custody, administration and tax preparation expenses; (iv) the out-of-pocket costs of any litigation; (v) insurance including costs of any D&O liability or other insurance and indemnification (including advances) or extraordinary expense or liability relating to the affairs of Private Funds; (vi) placement compensation payable to any placement agent (including any out-of-pocket expenses of such placement agent and any indemnification expenses payable to such placement agent); (vii) expenses of the limited partner advisory boards for certain Private Funds and meetings of the limited partners; (viii) expenses of liquidating and dissolving the Private Funds, including any fees and expenses of the Private Funds' liquidator; (ix) certain travel expenses; (x) other services, provider expenses (e.g., expenses related to directors of a Private Fund); (xi) all expenses incurred in connection with a Private Fund's business, affairs and operations, including identifying, structuring, managing, evaluating, trading, conducting due diligence on, investing in, acquiring, holding, disposition of (including the transfer or sale of), any portfolio investments or prospective investments (whether or not consummated), including "broken-deal expenses," legal, accounting, engineering and other professional fees, fees of finders or sourcing partners, and travel and lodging expenses; (xii) all expenses incurred in connection with the securing of financing, including expenses related to the negotiation and documentation of agreements with one or more lenders or the posting of collateral; (xiii) all principal and interest on, and fees, costs and expenses arising out of, all borrowings and guarantees made by, and other indebtedness of, the Private Funds; (xiv) all extraordinary expenses or liabilities; (xv) all professional fees incurred in connection with the business or management of the Private Funds, including reasonable dues for professional organizations related to the investment strategy of the Private Funds; (xvi) all expenses relating to the potential transfer or actual transfer of investors' interests in the Private Funds (to the extent not paid by the transferor or transferee); (xvii) all expenses relating to any letter agreements, distribution agreements and other similar agreements with investors and prospective investors and modifications and amendments to such agreements; (xviii) all expenses incurred in connection with any restructuring or amendments or supplements to the OM, to the constituent documents of the Private Funds, and corresponding restructuring or amendments to the constituent documents of the general partner and related entities; (xix) all expenses incurred in connection with the formation of alternative investment vehicles and special purpose vehicles and subsidiaries of the Private Funds; (xx) any amounts paid by the Private Funds or alternative investment vehicles for any hedging transactions (including any amounts necessary to satisfy margin requirements) or permitted borrowing requirements; (xxi) all expenses incurred in connection with multimedia, analytical, database, news or other third-party research services and related terminals for the delivery of such services; (xxii) all fees charged by third parties for sourcing and/or managing portfolio investments, including fees paid to administrators of portfolio investments; (xxiii) all third-party fees and expenses charged to the Private Funds, including in connection with tax and legal advice, custodial services and compliance services; (xxiv) all fees charged, and reasonable out-of-pocket expenses incurred, by the Private Funds' administrators and custodians; (xxv) management fees; and (xxvi) any value added tax payable in respect of any expenses, fees or costs set forth in clauses (i) – (xxv) above. Generally, feeder funds bear a pro rata share of the expenses associated with the related master fund. Accounts or Private Funds that invest with an underlying manager or in underlying funds generally bear associated fees (which typically include both

asset based and performance based fees) and expenses of such underlying managers and/or underlying funds. Investors and clients bear the cost of investments in funds, which can include affiliated funds and exchange traded funds ("ETFs"). Further details on expenses that are charged are in the relevant OM and/or other governing documents.

### **OFFSET FEES**

With respect to certain Private Funds and SMAs an Adviser or one of its employees or affiliates at times receives commitment fees, break-up fees, directors' fees consulting fees, transaction fees, advisory fees, closing fees and other similar fees from a portfolio investment of such Private Fund and SMA, respectively, as well as placement or other similar fees payable to a broker-dealer ("Offset Fees"). The management fee received by an Adviser to a Private Fund or SMA or one of its affiliates is often reduced by the amount of Offset Fees received by such Adviser or affiliate. The extent to which Offset Fees reduce the management fee of a Private Fund or SMA is set forth in such Private Fund's OM and/or governing documents or the IMA governing the SMA, respectively. Further details on Offset Fees and how they affect the management fees of a Private Fund or SMA are in such Private Fund's OM and/or governing documents or the IMA governing SMA, respectively.

For an additional discussion of brokerage and other transaction costs, please refer to Item 12 ("Brokerage Practices") of this Brochure.

### **CO-INVESTMENT VEHICLES**

The Advisers may from time to time offer certain persons the opportunity to co-invest in particular investments alongside of a Private Fund, subject to certain restrictions. In each case where co-investors participate in an investment, the Advisers will allocate expenses associated with such investment, including broken-deal expenses, among such co-investors and other participants in the investment in accordance with BlackRock's expense allocation policies and procedures.

## Item 6 Performance-Based Fees and Side-By-Side Management

As discussed in Item 5 (“Fees and Compensation”) of this Brochure, fee arrangements vary by client, and are based on a number of different factors. Where applicable, performance fees or other performance-based compensation is generally based on exceeding specified yield or total return benchmarks or “hurdles” or an appropriate index and generally are payable: (i) on a quarterly or annual basis; (ii) at the time of withdrawal or redemption with respect to the amount withdrawn and/or redeemed; or (iii) as investments are realized and/or capital is distributed. Certain Private Funds charge performance fees or allocations based on the relevant Private Funds’ net profits without regard to any index or performance hurdle. In some cases, these arrangements are subject to a high water mark or other provisions intended to assure that prior losses are recouped before giving effect to any performance fees or allocations. In other cases, certain Private Funds have periodic or cumulative performance hurdles prior to BlackRock receiving a performance fee or allocation. Clawback or deferral provisions also apply to performance fees paid with respect to certain Private Funds. The timing and amount of performance fees or allocations are described in the relevant OM and/or other governing documents of the applicable Private Fund.

Clients should be aware that when an Adviser or an affiliate receives performance-based fees or allocations, or BlackRock personnel have any other financial incentive to achieve gains in excess of the disincentive to suffer losses, BlackRock and/or such personnel have an incentive to choose investments that are riskier or more speculative than might otherwise be chosen.

In addition, the Advisers manage different types of accounts having different fee arrangements. Side-by-side management by Advisers of US Registered Funds, institutional accounts, SMA program accounts and Private Funds raises potential conflicts of interest. US Registered Funds and SMA program accounts, for example, generally pay management fees based on a fixed percentage of assets under management, whereas institutional accounts and Private Funds have more varied fee structures, including a combination of asset- and performance-based compensation. In certain cases, an Adviser or its related persons also have a financial interest in a Private Fund (or in a US Registered Fund, though the extent of US Registered Fund interests is likely to be less than with respect to Private Funds). The Adviser has incentive to favor certain accounts over others that are less lucrative where: (i) the actions taken on behalf of one account potentially impact other similar or different accounts (e.g., because such accounts have the same or similar investment styles or otherwise compete for investment opportunities, have potentially conflicting investments or investment styles, or have differing abilities to engage in short sales and economically similar transactions); and (ii) the Adviser and its personnel have differential interests in such accounts (i.e., expose the Adviser or its related persons to differing potential for gain or loss through differential ownership interests or compensation structures – including circumstances where some accounts pay only asset-based fees while others are subject to performance or incentive fees or allocations). To help mitigate such potential conflicts of interest, BlackRock’s policies and procedures stress that investment decisions are to be made in accordance with the fiduciary duties owed to each such account and without consideration of BlackRock’s or an Adviser’s (or either of their personnel’s) pecuniary, investment or other financial interests.

As a result of certain regulations governing the ability of accounts investing side-by-side, it is possible that different account types are not permitted to participate in an investment opportunity at the same time. The decision as to which accounts participate will take into account the suitability and the strategy of the applicable accounts. It is possible that an account is prevented from participating due to such investment opportunity being more appropriate within the primary strategy of another account.

## Item 7 Types of Clients

### OVERVIEW OF CLIENTS

As discussed in Item 4 (“Advisory Business”) of this Brochure, the Advisers’ investment management services are offered to investment companies, single-investor funds, discretionary and non-discretionary advisory programs, commingled investment vehicles, and individuals and institutional investors through separate account management. The Advisers’ clients include, but are not limited to: financial institutions, registered investment companies, ETFs, business development companies, private investment funds, real estate investment trusts, profit sharing plans, pension funds and other retirement accounts, insurance companies, charitable and endowment organizations, corporations, banks and thrift institutions, estates and trusts, and other institutional type accounts (both taxable and tax-exempt), government agencies, government chartered corporations, quasi-governmental agencies, state and local governments and non-U.S. pension funds, national banks, as well as high net worth and other individuals. Not every Adviser covered herein will manage each type of client account. The Advisers can advise both U.S. and non-U.S. clients subject to applicable law. Each of the Advisers generally utilizes the common policies and procedures described in this Brochure<sup>7</sup>.

An Adviser may seek to obtain, verify, and record information that identifies each client who retains the Adviser to manage its account or who invests in a fund managed by the Adviser, in order to help the U.S. Government fight the funding of terrorism and money laundering activities. The Adviser will also screen clients against appropriate sanctions lists administered by the United States Office of Foreign Assets Control, European Union (“EU”) and United Nations, including any other applicable regimes to where the adviser operates.

The types of clients to which an Adviser typically provides investment management services are noted below, but are not limited to those listed.

	<i>BFM</i>	<i>BAL</i>	<i>BIL</i>	<i>BCM</i>	<i>BIM</i>	<i>BFA</i>	<i>BSL</i>	<i>BAMNAL</i>	<i>BAMS</i>
Individuals (other than high net worth individuals)					X				
High Net Worth Individuals	X			X	X				
Banks or Thrift Institutions	X			X	X			X	
Investment Companies (including Mutual Funds & ETFs)	X	X	X	X	X	X	X	X	
Business Development Companies		X							
Pooled Investment Vehicles (other than US Registered Funds)	X	X	X	X	X	X	X	X	X
Pension & Profit Sharing Plans (other than plan participants)	X		X		X			X	
Charitable Organizations	X		X	X	X		X	X	
Corporations or Other Businesses Not Listed	X		X	X	X		X	X	
State or Municipal Government Entities									
Other Investment Advisers					X		X		
Insurance Companies	X		X	X	X		X		X
Other	X	X	X	X	X	X	X	X	

<sup>7</sup> In some cases, laws and regulations applicable to Advisers located outside the U.S. and authorized by a local financial regulator differ from those described generally herein. In such cases, these Advisers have policies and procedures in support of such laws, rules and regulations.

### ***US Registered Funds***

BAL and BFA serve as investment advisers to BlackRock's proprietary open-end investment companies, including ETFs, and closed-end investment companies, which are primarily registered under the Investment Company Act, and are grouped into several complexes. BFA is the investment adviser to the U.S. iShares ETF Complex ("US iShares ETFs") and sub-adviser to non-proprietary ETFs.

The BlackRock Equity-Bond Complex consists of various open-end mutual funds, including variable insurance funds. The BlackRock Closed-End Complex consists principally of publicly traded closed-end investment companies. The BlackRock Equity-Liquidity Complex consists of various open-end investment companies, including money market funds serving the institutional and retail market.

The US iShares ETF Complex consists of exchange traded registered investment companies that are listed to trade in the secondary market, which are primarily index funds, but includes some actively managed ETFs. The funds in each complex have a common board of directors/board of trustees. Together, the complexes are referred to as the "BlackRock US Funds". The Advisers can also serve as adviser or sub-adviser for a variety of U.S. registered investment companies advised by an affiliated or unaffiliated advisers ("Sub-Advised Funds" and, together with the BlackRock US Funds, "US Registered Funds").

### ***Private Funds***

Private Funds include, but are not limited to, funds focusing on commercial or residential mortgages, bank loans, money market securities, distressed assets and certain sectors (e.g., energy, renewable power or health sciences); fixed income funds; equity funds; direct private equity funds and special situations funds; infrastructure funds; funds of private equity or hedge funds and other Fund of Funds and direct co-investment funds; opportunistic funds; collateralized debt obligation funds; collateralized loan obligation funds; managed futures funds and portable alpha funds.

Private Funds are organized as domestic or offshore (non-U.S.) companies, limited partnerships, limited liability companies, corporate trusts or other legal entities, in order to meet the legal, regulatory and tax demands of investors and as determined appropriate by the applicable Adviser. As a general matter, each Private Fund is managed in accordance with its investment objectives, strategies and guidelines and is not generally tailored to the individualized needs of any particular investor in the Private Fund (each an "Investor"). In addition, an investment in a Private Fund does not, in and of itself, create an advisory relationship between the Investor and an Adviser. Therefore, Investors must consider whether the Private Fund meets their investment objectives and risk tolerance prior to investing in a Private Fund. Information about each Private Fund, including its investment risk, can be found in its confidential private placement OM or other governing documents, which will be available to current and prospective Investors only through a BlackRock-affiliated broker-dealer or another authorized party. In some cases, a Private Fund is established for the benefit of a single investor, in which case the Private Fund is tailored to the individualized needs of the investor. BlackRock, or an affiliate, generally acts as general partner, managing member or investment manager or otherwise exercises investment discretion with respect to these products in which investors invest. Certain BlackRock non-U.S. affiliates act as placement agents with respect to the distribution of Private Funds to investors outside the U.S. While this Brochure includes information relevant to investors, this Brochure is designed solely to provide information about the Advisers and should not be considered to be an offer of interests in any Private Fund.

Private Funds that are offered to U.S. Persons are typically excepted from the definition of an "investment company" pursuant to Section 3(c)(1) (such Private Funds, the "3(c)(1) Funds") or Section 3(c)(7) (such Private Funds, the "3(c)(7) Funds") of the Investment Company Act. Interests in the Private Funds are offered on a private placement basis or under Regulation S of the Securities Act. Interests in the 3(c)(1) Funds are offered to persons who are "accredited investors" as defined under the Securities Act of 1933, as amended (the "Securities Act"), and "qualified clients" as defined in Rule 205-3 under the Advisers Act (to the extent a performance fee is charged). Interests in the 3(c)(7) Funds are offered to persons who are both "accredited investors" as defined under the Securities Act and "qualified purchasers" as defined under the Investment Company Act. In some cases, the Private Funds are commodity pools for which an Adviser is a commodity pool operator that: (i) is exempt from certain reporting, recordkeeping and disclosure requirements pursuant to Rule 4.7 under the Commodity Exchange Act ("CEA"); (ii) is a registered commodity pool operator; or (iii) is exempt from registration and related requirements pursuant to CEA



Rule 4.13(a)(3), or other provisions under the CEA and the rules of the U.S. Commodities Futures Trading Commission ("CFTC") thereunder, and in connection with these exemptions, investors are required to meet additional requirements. Additionally, investors in Private Funds are subject to certain other eligibility requirements which are set forth in the OM or other governing documents for each of the Private Funds. BlackRock personnel (including, but not limited to, the Advisers' investment strategy personnel responsible for the management of such Private Funds or other client accounts) who are qualified purchasers, "knowledgeable employees" (as defined in Rule 3c-5 under the Investment Company Act) or who meet the Private Fund's eligibility criteria and other applicable regulatory requirements, and certain other eligible personnel of BlackRock are permitted to invest in the Private Funds.

Private Funds that are organized under the laws of jurisdictions outside of the U.S. may be offered outside of the U.S. to persons who are not "U.S. Persons," as defined under Regulation S of the Securities Act. Additionally, pursuant to Section 7(d) of the Investment Company Act and the relevant SEC guidance thereunder, such Private Funds can also be offered on a private placement basis to U.S. persons (typically tax-exempt institutions) that are both "accredited investors" as defined under the Securities Act and for 3(c)(7) Funds "qualified purchasers" as defined under the Investment Company Act.

Certain of the Private Funds operate using "master-feeder" structures, pursuant to which trading operations reside in a "master fund" while investors access the master fund directly or invest through one or more "feeder funds" that, in turn, invest (directly or indirectly) in the master fund. Private Funds can also use special purpose vehicles to aggregate investments by Private Funds into certain underlying investments or for structuring purposes.

BlackRock, and its related persons often invest in and/or serve as general partner, or managing member, or on the board of directors or advisory board of a Private Fund. BlackRock, and its related persons generally act as investment manager or otherwise exercises investment discretion with respect to certain Private Funds and often provide services other than advice (including, but not limited to, administration, organizing and managing the business affairs, executing and reconciling trades, preparing financial statements and providing audit support, preparing tax related schedules or documents, and sales and investor relations support, diligence and valuation services) to such funds, in some cases for a fee separate and apart from the advisory fee. A Private Fund often pays or reimburses BlackRock for certain organizational and initial offering expenses and operating expenses related to the Private Fund.

#### ***Other Pooled Investment Vehicles***

Certain Advisers manage publicly-traded real estate investment trusts, private real estate investment trusts, commodity pools, grantor trusts and other structured products.

BFA is the adviser and commodity trading advisor to trusts that are commodity pools as defined in the CEA. Certain investment pools advised by BlackRock Investment Advisers trade on a stock exchange, as exchange traded funds (collectively, "iShares ETFs"). Although shares representing interests in such investment pools are bought or sold on a stock exchange, such shares cannot be purchased or redeemed directly from the iShares ETF except in large baskets of one or more large blocks of shares by institutions that sign an agreement to become authorized participants or participating dealers.

Certain Advisers provide investment advice to portfolios commonly referred to as collective investment schemes, which is a type of pooled investment common in the United Kingdom, Luxembourg and Ireland. Some of the collective investment schemes are Undertakings for Collective Investments in Transferable Securities ("UCITS"). UCITS is the European regulatory framework for an investment vehicle that can be marketed across the EU, subject to certain notification and registration requirements.

#### ***Separately Managed Accounts***

As discussed above in Item 4 ("Advisory Business") of this Brochure, certain Advisers provide investment management services directly to institutional and high net worth clients through SMAs. As part of their institutional SMA business, the Advisers have developed many investment strategies to meet individual client risk profiles. High net worth clients typically retain an Adviser to manage their accounts by participating in an SMA or wrap fee program. BIM sponsors Private Investors, and BIM participates as an investment manager in SMA programs sponsored by various third party firms. BIM's clients include, but are not limited to, high net worth individuals, profit sharing plans,



pension funds and other retirement accounts, charitable and endowment organizations, government entities, investment companies, corporations and other institutions (both taxable and tax-exempt), trusts and estates. BIM's advisory services or certain investment strategies are not available to certain prospective clients residing or domiciled outside the U.S., and such clients should contact MLPF&S (for Private Investors), their program Sponsor (for other SMA programs) or BIM for more information. For Private Investors accounts, BIM generally requires a minimum investment of at least: (i) \$250,000 for equity and fixed income investment strategies with the Wrap Fee Option, and (ii) \$1,000,000 for equity investment strategies and \$250,000 for fixed income strategies with the Standard Fee Option. For Dual Contract SMA Program accounts, BIM generally requires a minimum investment of at least \$500,000 for an equity account and \$1 million for a fixed income account although smaller accounts can be accepted at BIM's discretion. Higher minimums are required for certain programs and/or investment strategies, please see Item 5 ("Fees and Compensation") of this Brochure for more information. Clients participating in other SMA programs should contact their program Sponsors for more information on minimum account sizes and other eligibility requirements.

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

In managing discretionary client accounts and providing recommendations to non-discretionary clients, the Advisers utilize various investment strategies and methods of analysis implemented by BlackRock's Investment Groups ("Investment Group"). This Item 8 describes various methods of analysis and investment strategies, as well as the primary risks associated with these investment strategies. However, it is not possible to identify all of the risks associated with investing and the particular risks applicable to a client account will depend on the nature of the account, its investment strategy or strategies and the types of securities held.

While an Adviser seeks to manage accounts so that risks are appropriate to the strategy, it is often not possible or desirable to fully mitigate risks. Any investment includes the risk of loss and there can be no guarantee that a particular level of return will be achieved. Clients and other investors should understand that they could lose some or all of their investment and should be prepared to bear the risk of such potential losses. Clients and other investors should read carefully all applicable informational materials and offering/governing documents, including OMs and prospectuses for further information on the various risks prior to retaining an Adviser to manage an account or investing in any BlackRock investment product.

Clients and other investors should be aware that while an Adviser does not limit its advice to particular types of investments, mandates can be limited to certain types of securities or to the recommendation of investment advisers or managed funds, and are not always diversified. The accounts managed by the Advisers are generally not intended to provide a complete investment program for a client or investor. Clients and other investors are responsible for appropriately diversifying their assets to guard against the risk of loss.

### **FIXED INCOME MANDATES**

The Advisers utilize fixed income strategies that are actively managed or model or index based. Actively managed fixed income mandates generally employ an active investment style that emphasizes rotation among different types of debt on a relative value basis, specific security selection, quantitative analysis of each security and the portfolio as a whole and intensive credit analysis and review. Model-based institutional strategies typically invest across a broad spectrum of global fixed income securities, as well as currencies, futures and swaps. A risk-controlled, systematic process is utilized for model-based portfolio construction and alpha generation. Alpha sources include security selection, duration and yield curve positioning, industry rotation, asset allocation, and currency positioning. For institutional index strategies, BlackRock typically invests in accordance with the risk and return profile of a benchmark either by replicating an index, or utilizing security level or stratified sampling where an index is disaggregated into smaller cells in an effort to match the risk characteristics of each cell.

For certain Private Investors and other SMA program investment strategies, BIM creates and maintains generally applicable guidelines ("Model Guidelines") which specify, for example, particular securities or guidelines for, among other things, the asset class, issuer, duration, maturity and/or credit quality of fixed income securities that can be held in an account following the particular strategy. The Model Guidelines will change from time to time at BIM's discretion based on market and other considerations.

In seeking to achieve long-term investment performance consistent with clients' and other investors' objectives and policies, the Advisers seek to establish a continuous and comprehensive understanding of the investment risks in each portfolio, as well as those risks inherent in the increasingly complex global capital markets. Accordingly, the Advisers generally utilize proprietary investment technology developed by BlackRock, particularly for institutional fixed income and cash management businesses. BlackRock believes that this technology provides both a high degree of automation in trade processing and compliance, as well as highly sophisticated securities and portfolio analytics that permit a continuous, thorough understanding of the risks taken, or proposed to be taken, relative to each client's benchmark or on an absolute basis (without reference to a benchmark), as appropriate. In addition, BlackRock's senior risk management professionals work closely with portfolio managers to ensure that models reflect market conditions, identify and assess risks, and develop strategies to manage such risks.

## **EQUITY MANDATES**

An Adviser's equity platform can offer a broad range of products that vary according to investment style (active, scientific, index and/or passive management), market capitalization (small-, mid-, small/mid-, large- and all-cap), and geography (global, international and regional). The product range also includes sector funds, long-only and long-short portfolios, as well as products that combine different strategies to create balanced, multi asset and asset allocation portfolios. For certain Private Investors and other SMA program investment strategies, BIM creates and maintains "target" portfolios of securities, to which securities are added and from which securities are removed from time to time. Investment Groups are supported by extensive resources worldwide. Individual portfolio management teams interact to review market developments, opportunities and strategies. A Global Equity meeting of portfolio managers and analysts is held regularly to review macroeconomic trends, sector exposures and investment themes. Risk assessment meetings generally are held at least monthly and review, among other things, factor exposures, guideline compliance and attributions.

## **CASH MANAGEMENT MANDATES**

In cash management portfolios, the investment process emphasizes safety and liquidity over yield. Risk is sought to be controlled through ongoing credit review, stress testing and risk management analysis and diversification. The Cash Management Group ("CMG") of the Investment Groups holds weekly meetings to review risk, relative value, yield curve positioning, credit and rate outlook, among other things. CMG and BlackRock's Risk & Quantitative Analysis Group ("RQA") regularly monitor portfolio construction, including liquidity positioning, maturity structure and security selection. The CMG Credit Committee approves individual issuers, sets aggregate exposure limits, and reviews counterparties and evolving risks. CMG and RQA regularly review market data, industry information and proprietary analytics.

## **ALTERNATIVE MANDATES**

BlackRock alternatives focus on sourcing and managing high-alpha investments with lower correlation to public markets and developing a holistic approach to address client needs in alternatives investing. Our alternatives products fall into two main categories: 1) core alternatives, and 2) currency and commodities. Core includes alternative solutions, direct hedge funds, hedge fund and private equity solutions (Funds of Funds), opportunistic private equity and credit, real estate and infrastructure offerings. Certain of these products involve a higher level of investment risk, while seeking greater returns than traditional investment products.

Alternative products invest in a wide array of instruments depending on their respective investment guidelines and objectives, including but not limited to equity securities, warrants, commercial paper, government securities, municipal securities, options contracts, future contracts and private funds. Further information can be found in the relevant OM and/or governing document, if applicable, for each Private Fund or the IMA for each institutional separate account.

BlackRock solicits clients to invest in such products, from time to time and when appropriate, as these investments are not necessarily appropriate for all clients. Not all clients afforded the opportunity to invest will choose to invest. BlackRock may on a discretionary basis invest in such products on a client's behalf, in accordance with the client's investment guidelines and restrictions.

## **MULTI-ASSET MANDATES**

Certain Advisers develop and manage investment mandates and products involving multiple strategies and asset classes, including strategies that permit the Advisers to allocate all or a portion of the portfolio management to non-affiliated investment advisers selected by the Advisers. Advisers develop asset allocation strategies and liability driven strategies for these mandates. Multi-asset strategies generally utilize a wide variety of asset classes and/or investment styles, and employ a variety of techniques and investment vehicles, including Funds of Funds that invest in hedge funds (including commodity pools), private equities, ETFs and mutual funds or other categories of funds (including BlackRock-managed funds), equities, bonds, cash, alternative investments and derivatives.

## INDEX MANDATES

Certain Advisers provide investment advisory services to client accounts (e.g., US Registered Funds, other pooled investment vehicles, SMAs) whose investment objective is to achieve investment results, before fees and expenses that correspond generally to the total return performance, of a particular index ("Underlying Index"). Generally, Underlying Indices are developed by index providers that are not affiliated with BlackRock, but in some circumstances, BlackRock Index Services, LLC ("BIS"), an affiliate of the Advisers, is the index provider. The Advisers and BIS have established a governance framework designed to prevent the undue influence of the Advisers in the operation of any index developed by BIS ("BIS Index"). This framework includes information barriers to restrict the sharing of confidential information and a committee that approves index methodology changes and is independent of portfolio management and trading.

BlackRock does not provide any warranty or guarantee against index providers' errors. Portfolios managed to track an index have passive investment risk since they are not actively managed and do not attempt to take defensive positions in declining markets. Please see Item 8 ("Investment Strategy Risks") for more information about index-related risks.

BlackRock's index-based Funds of Funds strategies utilize internally managed funds as building blocks to provide performance representative of an index. Advisers also offer Funds of Funds strategies that allocate to a variety of internally managed funds based on the output of proprietary quantitative models.

## OTHER STRATEGIES

### *Borrowing and Leverage*

BlackRock enters into borrowing arrangements on behalf of certain funds, including by entering into a credit facility or other means of borrowing with a service provider to a fund, an affiliate of the fund or such service provider or another third-party lender. As a general matter, these borrowing arrangements are used to meet short-term investment and liquidity needs. However, implementing any of the investment strategies described herein can involve an Adviser borrowing for leverage or employing other forms of leverage to the extent permitted by investment guidelines or in the case of US Registered Funds, as permitted by the Investment Company Act. The use of leverage entails risks and, in certain cases, involves using reverse repurchase agreements and other borrowing methods, including: (i) dollar rolls; (ii) lending securities through repurchase agreements and other lending methods; (iii) employing hedging strategies that include the use of interest rate swaps, caps and floors; (iv) buying and selling options or futures to manage duration and risk in connection with securities portfolios; (v) entering into forward settlement transactions, some of which include when-issued securities; (vi) establishing equity futures positions to equitize cash holdings in an account; and (vii) operational leverage embedded in derivative instruments and other financial products. The investment strategies and risks associated with employing leverage are set forth in the relevant operating document and/or OM, if applicable, of each Private Fund and registration statement of each US Registered Fund.

## INVESTMENT STRATEGY RISKS

BlackRock supports its investment strategies with proprietary technology, such as that provided by BlackRock Solutions®, which produces risk management reports using technology such as its "Aladdin" technology platform. In some cases, RQA generates supplementary daily risk reports. However, RQA generally provides periodic detailed risk analyses, including risk reports that are discussed with portfolio managers, across all asset classes, as part of the RQA risk oversight process. Among other things, RQA's role enables the risks associated with the portfolios managed by the Advisers to be understood by relevant portfolio managers and reviewed for conformity with client objectives. Prospective clients and other investors should be aware that no risk management system is fail-safe, and no assurance can be given that risk frameworks employed by RQA and an Adviser's portfolio managers (e.g., stop-win, stop-loss, Sharpe Ratios, loss limits, value-at-risk or any other methodology now known or later developed) will achieve their objectives and prevent or otherwise limit substantial losses. No assurance can be given that the risk management systems and techniques or pricing models will accurately predict future trading patterns or the manner in which investments are priced in financial markets in the future. BlackRock investment professionals employ quantitatively-based financial and analytical models to aid in the selection of investments for clients and to determine the risk profile of client accounts. The success of an investment program and trading activities depends, in part, on

the viability of such analytical models. Additional risks for relevant products are more fully described in such products' offering and/or governing documentation.

The investment process for fixed income centers around investment strategy meetings which are generally held weekly. The meetings are chaired by the heads of the fixed income portfolio teams in BlackRock's Investment Group. Following discussions with their teams, Investment Group personnel present their views during market outlook meetings attended by fixed income investment professionals. Next, the Investment Group personnel along with representatives from RQA, hold portfolio strategy meetings to discuss asset allocation, portfolio risk, and investment themes. These meetings are designed to share ideas across Investment Groups to help determine the appropriate interest rate risk, convexity, term structure, credit quality, liquidity bias and sector allocations for client strategies. RQA holds similar risk and performance review meetings with the Investment Groups across all asset classes (such as equities, multi asset, beta and alternatives). Frequency of meetings varies by business (e.g., monthly, every six weeks and certain supplementary quarterly meetings). RQA also has a Risk and Performance Targets review process for the majority of active accounts, whereby risk tolerances are set at the account level based on discussions with RQA, the businesses and the Investment Groups. RQA monitors exceptions with the business leads and discusses actions with the chief investment officers. There is a monthly meeting with RQA's Portfolio Risk Alignment Committee which is held to review and discuss all exceptions and actions from RQA - Investment Groups discussions.

Certain risks apply specifically to particular investment strategies or investments in different types of securities or other investments that clients and other investors should be prepared to bear. The risks involved for different client accounts or funds will vary based on each client's investment strategy and the type of securities or other investments held in the client's account or the fund. The following are descriptions of various primary risks related to the investment strategies used by the Advisers. Not all possible risks are described below. Clients and other investors should read carefully all applicable informational materials and offering/governing documents, including OMs and prospectuses for further information on the various risks prior to retaining an Adviser to manage an account or investing in any BlackRock investment product.

**Asset Allocation Strategy Risk** - Asset allocation strategies do not assure profit or diversification and do not protect against loss.

**Asset Class Risk** - Securities in a portfolio can underperform in comparison to the general securities markets, a particular securities market, or other asset classes.

**Borrowing Risk** - Borrowing may exaggerate changes in the net assets and returns of a portfolio. Borrowing will cost the portfolio interest expense and other fees, potentially reducing a portfolio's return. This can at times result in a need for the portfolio to liquidate positions when it may not be advantageous to do so to satisfy its borrowing obligations. Borrowing arrangements can be used to meet short-term investment and liquidity needs or to employ forms of leverage that entails risks, including the potential for higher volatility and greater declines of a portfolio's value, and fluctuations of dividend and other distribution payments.

**Commodity Risk** - Negative changes in a commodity market could have an adverse impact on the value of commodity-linked investments including companies that are susceptible to fluctuations in commodity markets. The value of commodity-linked investments can be affected by changes in overall market movements, taxation, terrorism, nationalization or expropriation, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as, weather (e.g., drought, flooding), livestock disease, embargoes, tariffs and international economic, political and regulatory developments. The prices of sector commodities (e.g., energy, metals, agriculture and livestock) can fluctuate widely due to factors such as changes in value, supply and demand and governmental regulatory policies.

**Competition Risk** - There can be no assurance that the Advisers will be able to locate, consummate, and exit investments that satisfy a portfolio's rate of return objectives or that a portfolio will be able to invest fully its committed capital.

**Concentration Risk** - Concentrating investments in an issuer or issuers, in a particular country, group of countries, region, market, industry, group of industries, sector or asset class means that performance will be more susceptible to loss due to adverse occurrences affecting that issuer or issuers, particular country, group of countries, region, market, industry, group of industries, sector or asset class than a more diversified mix of investments.

**Controlling Interest Risk** - Because of its equity ownership, representation on the board of directors and/or contractual rights, a portfolio may be considered to control or influence the conduct of portfolio companies. Under certain circumstances, such ownership or roles could be used by third parties as the basis for such parties to assert environmental, pension-related, securities law or other claims against such portfolio or its owners or affiliates.

**Conversion of Equity Investments Risk** - After its purchase, a non-equity investment directly or indirectly held by a portfolio, such as a convertible debt obligation may convert to an equity security (converted investment). Alternatively, a portfolio may directly or indirectly acquire equity securities in connection with a restructuring event related to one or more of its non-equity investments. Challenges in liquidating the converted investment at an advantageous time, would impact the performance of the portfolio.

**Counterparty Risk** - Transactions, including certain derivative transactions, entered into directly with a counterparty are subject to the risk that the counterparty will fail to perform its obligations in accordance with the agreed terms and conditions of the transaction. A counterparty's bankruptcy or other failure to perform its obligations due to financial difficulties, would result in significant delays in obtaining any recovery in a bankruptcy or other reorganization proceeding or no recovery in such circumstances.

**Credit/Default Risk** - Debt issuers and other counterparties of fixed income securities or instruments in some instances default on their obligation to pay interest, repay principal or make a margin payment, or default on any other obligation. Additionally, the credit quality of securities or instruments could deteriorate (e.g., downgraded by ratings agencies), which would impair a security's or instruments liquidity and decrease its value.

**Currency Risk** - Currencies are purchased and sold for portfolios through the use of forward contracts or other instruments. A portfolio that seeks to trade in foreign currencies can have limited access to certain currency markets due to a variety of factors including government regulations, adverse tax treatment, exchange controls, and currency convertibility issues. Certain portfolios can hold investments denominated in currencies other than the currency in which the portfolio is denominated. Currency exchange rates can be volatile, particularly during times of political or economic unrest or as a result of actions taken by central banks. A change in the exchange rates has the potential to produce significant losses to a portfolio.

**Cyber Security Risk** - With the increased use of technologies such as the Internet to conduct business, a portfolio is susceptible to operational, information security and related risks. In general, cyber incidents can result from deliberate attacks or unintentional events and are not limited to, gaining unauthorized access to digital systems, and misappropriating assets or sensitive information, corrupting data, or causing operational disruption, including the denial-of-service attacks on websites. Cyber security failures or breaches by a third party service provider and the issuers of securities in which the portfolio invests, have the ability to cause disruptions and impact business operations, potentially resulting in financial losses, the inability to transact business, violations of applicable privacy and other laws, regulatory fines, penalties, reputational damage, reimbursement or other compensation costs, and/or additional compliance costs, including the cost to prevent cyber incidents.

**Debt Instruments Risk** - Generally investments in debt and credit-related instruments may be secured or unsecured and may be structurally or contractually subordinated to substantial amounts of senior indebtedness. Other factors may materially and adversely affect the market price and yield of such debt investments, including investor demand, changes in the financial condition of the applicable portfolio company, government fiscal policy and domestic or worldwide economic conditions.

**Derivative Risk** - Investments in derivatives, or similar instrument, including but not limited to, options, futures, options on futures, forwards, participatory notes, swaps, structured securities, tender-option bonds and derivatives relating to foreign currency transactions, which can be used to hedge a portfolio's investments or to seek to enhance returns, entail specific risks relating to liquidity, leverage and credit that can reduce returns and/or increase volatility. Losses



in a portfolio from investments in derivative instruments can result from the potential illiquidity of the markets for derivative instruments, the failure of the counterparty to fulfill its contractual obligations, the portfolio receiving cash collateral under the transactions and some or all of that collateral being invested in the market, or the risks arising from margin posting requirements and related leverage factors associated with such transactions. In addition, many jurisdictions continue to review practices and regulations relating to the use of derivatives, or similar instrument. Such reviews could make such instruments more costly, limiting the availability of, or otherwise adversely affecting the value or performance of such instrument.

**Developed Countries Risk** - Investments in developed countries subject a portfolio to regulatory, political, currency, security, demographic, and economic risk specific to developed countries. Developed countries are impacted by changes to the economic health of certain key trading partners, regulatory burdens, debt burdens, and the price or availability of certain commodities. Developed countries tend to represent a significant portion of the global economy and have generally experienced slower economic growth than some other countries or regions.

**Distressed Securities Risk** - Investments in companies that are in poor financial condition, lack sufficient capital or are involved in bankruptcy or reorganization proceedings face the unique risks of lack of information with respect to the issuer, the effects of bankruptcy laws and regulations and greater market volatility than is typically found in other securities markets. As a result, investments in securities of distressed companies involve significant risks that could result in a portfolio, incurring losses with respect to such investments.

**Emerging Markets Risk** - Investments in emerging markets can be subject to a greater risk of loss than investments in more developed markets, as they are more likely to experience inflation risk, political turmoil and rapid changes in economic conditions. Investing in the securities of emerging markets involves certain considerations not typically associated with investing in more developed markets, including but not limited to, the small size of such securities markets and the low volume of trading (possibly resulting in potential lack of liquidity and in price volatility), political risks of emerging markets which can include unstable governments, government intervention in securities or currency markets, nationalization, restrictions on foreign ownership and investment, laws preventing repatriation of assets and legal systems that do not adequately protect property rights. Further, emerging markets can be affected adversely by changes to the economic health of certain key trading partners, such as the U.S., regional and global conflicts and terrorism and war. Emerging markets often have less uniformity in accounting and reporting requirements, unreliable securities valuation and greater risk associated with custody of securities.

**Equity Securities Risk** - Equity securities are subject to changes in value and their values can be more volatile than other asset classes. The value of equity securities varies in response to many factors. These factors include, without limitation, factors specific to an issuer and the industry in which the issuer securities are subject to stock risk. Historically, U.S. and non-U.S. stock markets have experienced periods of substantial price volatility and should be expected do so again in the future.

**Fraud** - Of paramount concern in originating loans is the possibility of material misrepresentation or omission on the part of a borrower. Such inaccuracy or incompleteness may adversely affect the valuation of the collateral underlying the loans, or may adversely affect the likelihood that a lien on the collateral securing the loans has been properly created and perfected. Under certain circumstances, payments to a portfolio may be reclaimed if any such payment or distribution is later determined to have been made with intent to defraud or prefer creditors.

**Fraudulent Conveyance Risk** - If a court in a lawsuit brought by an unpaid creditor or representative of creditors of a borrower, such as a trustee in bankruptcy or the borrower as debtor-in-possession, were to find that the borrower did not receive fair consideration or reasonably equivalent value for incurring indebtedness evidenced by a loan made by a portfolio and the grant of any security interest or other lien securing such investment made by a portfolio, and, after giving effect to the incurring of such indebtedness, the borrower (a) was insolvent; (b) was engaged in a business for which the assets remaining in such borrower constituted unreasonably small capital; or (c) intended to incur, or believed that it would incur, debts beyond its ability to pay such debts as they mature, such court could invalidate, in whole or in part, such indebtedness and such security interest or other lien as fraudulent conveyances, subordinate such indebtedness to existing or future creditors of the borrower or recover amounts previously paid by the borrower (including to the relevant portfolio) in satisfaction of such indebtedness or proceeds of such security interest or other lien previously applied in satisfaction of such indebtedness.



**Frontier Markets Risk** - Investments in frontier markets are subject to a greater risk of loss than investments in more developed and traditional emerging markets. Frontier markets are more likely to experience inflation, currency and liquidity risks, political turmoil and rapid changes in economic conditions than more developed and traditional emerging markets. Frontier markets often have less uniformity in accounting and reporting requirements, unreliable securities valuation and greater risk associated with custody of securities.

**Hedging Risk** - Hedging techniques could involve a variety of derivatives, including futures contracts, exchange-listed and over-the-counter put and call options on securities, financial indices, forward foreign currency contracts, and various interest rate transactions. A transaction used as a hedge to reduce or eliminate losses associated with a portfolio holding or particular market that a portfolio has exposure, including currency exposure, can also reduce or eliminate gains. Hedges are sometimes subject to imperfect matching between the hedging transaction and its reference portfolio holding or market (correlation risk), and there can be no assurance that a portfolio's hedging transaction will be effective. In particular, the variable degree of correlation between price movements of hedging instruments and price movements in the position being hedged creates the possibility that losses on the hedge will be greater than gains in the value of the positions of the portfolio. Increased volatility will generally reduce the effectiveness of the portfolio's currency hedging strategy. Hedging techniques involve costs, which could be significant, whether or not the hedging strategy is successful. Hedging transactions, to the extent they are implemented, will not necessarily be completely effective in insulating portfolios from currency or other risks.

**Illiquid and Long-Term Investment Risk** - Certain portfolios may invest in private debt instruments secured by infrastructure or other assets for which the number of potential purchasers and sellers, if any, is often limited. This factor may have the effect of limiting the availability of these obligations for origination or purchase by a respective portfolio and may also limit the ability of a portfolio to sell such obligations at their fair market value prior to termination of such portfolio or in response to changes in the economy or financial markets. In particular, such investments will be relatively illiquid and there can be no assurance that a portfolio will be able to realize on such investments in a timely manner.

**Income Risk** - A portfolio's income can decline in some instances when interest rates decrease. During periods of falling interest rates if an issuer is able to repay principal prior to the security's maturity ("prepayment"), the portfolio could be caused to reinvest in securities with a lower yield, resulting in a decline in the portfolio's income.

**Index-Related Risk** - Index strategies are passively managed and do not take defensive positions in declining markets. There is no guarantee that a portfolio managed to an index strategy ("index portfolio") will achieve a high degree of correlation to its Underlying Index and therefore achieve its investment objective. Market disruptions and regulatory restrictions could have an adverse effect on the index portfolio's ability to adjust its exposure to the required levels in order to track its Underlying Index. Errors in index data, index computations and/or the construction of the Underlying Index in accordance with its methodology occur from time to time without being identified and corrected for a period of time or at all, which may have an adverse impact on a portfolio managed to the index. BlackRock does not provide any warranty or guarantee against index providers' errors. The index provider does not provide any warranty or accept any liability in relation to the quality, accuracy or completeness of data in respect of their indices, and does not guarantee that the index will be in line with its described index methodology. Errors and rebalances carried out by the index provider to the Underlying Index could increase the costs and market exposure risk of a portfolio.

**Interest Rate Risk** - When interest rates increase, fixed income securities or instruments will generally decline in value. Long-term fixed income securities or instruments will normally have more price volatility because of this risk than short-term fixed income securities or instruments.

**Issuer Risk** - A portfolio's performance depends on the performance of individual securities to which the portfolio has exposure. Adverse changes to the financial condition or credit rating of an issuer of those securities often cause the value of the securities to decline or become worthless.

**Investment Style Risk** - Different investment styles tend to shift in and out of favor depending upon market and economic conditions and investor sentiment. Portfolios can outperform or underperform other portfolios that invest in similar asset classes but employ different investment styles.

**Leverage Risk** - A portfolio utilizing leverage will be subject to heightened risk. Leverage often involves the use of various financial instruments or borrowed capital in an attempt to increase the return on an investment and is often intrinsic to certain derivative instruments. Leverage can take the form of borrowing funds, trading on margin, derivative instruments that are inherently leveraged, including but not limited to, forward contracts, futures contracts, options, swaps (including total return financing swaps and interest rate swaps), repurchase agreements and reverse repurchase agreements, or other forms of direct and indirect borrowings and other instruments and transactions that are inherently leveraged. Any such leverage, including instruments and transactions that are inherently leveraged, can result in the portfolio's market value exposure being in excess of the net asset value of the portfolio. A portfolio could need to liquidate positions when it is not advantageous to do so to satisfy its borrowing obligations. The use of leverage entails risks, including the potential for higher volatility and greater declines of a portfolio's value, and fluctuations of dividend and other distribution payments.

**Liquidity Risk** - Liquidity risk exists when particular investments are difficult to purchase or sell (e.g., not publicly traded and/or no market is currently available or may become less liquid in response to market developments). This can reduce a portfolio's returns because the portfolio may be unable to transact at advantageous times or prices. Investments that are illiquid or that trade in lower volumes may be more difficult to value.

**Long/Short Strategy Risk** - There is no guarantee that returns on a portfolio's long or short positions will produce high, or even positive, returns and the portfolio could lose money if either or both the portfolio's long and short positions produce negative returns.

**Management Risk** - A portfolio is subject to management risk, which is the risk that the investment process, techniques and analyses applied will not produce the desired results, and those securities or other financial instruments selected for a portfolio will result in returns that are inconsistent with the portfolio's investment objective. Portfolios advised by BlackRock are subject to threshold limitations on aggregate ownership interests in certain companies and commodities, arising from statutory, regulatory or self-regulatory organization requirements or company ownership restrictions (e.g., poison pills or other restrictions in organizational documents). In addition, legislative, regulatory, or tax developments affect the investment techniques or opportunities, available in connection with managing the portfolio and can also adversely affect the ability of the portfolio to achieve its investment objective (e.g., where aggregate ownership thresholds or limitations must be observed, a portfolio is subject to investment limitations in certain companies arising from statutory, regulatory or self-regulatory organization requirements or company ownership restrictions).

**Market Risk** - The market value of the instruments in which a portfolio invests will go up or down in response to the prospects of individual companies, particular sectors or governments and/or general economic conditions throughout the world due to increasingly interconnected global economies and financial markets.

**Micro-cap Companies Risk** - Stock prices of microcap companies are significantly more volatile, and more vulnerable to adverse business and economic developments, than those of larger companies. Microcap stocks are also thinly traded, making it difficult for a portfolio to buy and sell them.

**Municipal Securities Risk** - Municipal securities can be significantly affected by political or economic changes, as well as uncertainties in the municipal market related to taxation, changes in interest rates, relative lack of information about certain issuers of municipal securities, legislative changes or the rights of municipal security holders. Municipal securities backed by current or anticipated revenues from a specific project or specific assets can be negatively affected by the inability to collect revenues for the project or from the assets.

**New-Issue Securities Risk** - Investing in new issue securities involves risks that are in addition to those associated with investments which have been trading for an extended period of time because information typically used to evaluate investments often is not available for new issue securities. Subsequent to the purchase of a new issue security by an Adviser, information about the security or its issuer may become publicly available (e.g., the issuance

of a credit rating by a Ratings Agency) which could cause an Adviser to alter its view on the appropriateness of the investment for a portfolio.

**Non-Diversification Risk** - Non-diversification of investments means a portfolio invests a large percentage of its assets in securities issued by or representing a small number of issuers or exposure types. As a result, a portfolio's performance depends on the performance of a small number of issuers or exposures.

**Non-U.S. Securities Risk** - Investments in the securities of non-U.S. issuers are subject to the risks associated with non-U.S. markets in which those non-U.S. issuers are organized and operate, including but not limited to, risks related to foreign currency, limited liquidity, less government regulation, privatization, and the possibility of substantial volatility due to adverse political, economic, geographic events, or other developments, differences in accounting, auditing and financial reporting standards, the possibility of repatriation, expropriation or confiscatory taxation, adverse changes in investment or exchange controls or other regulations and potential restrictions on the flow of international capital. These risks are often heightened for investments in smaller capital markets, emerging markets, developing markets or frontier markets.

**Offshore Investor Risk** - A portfolio seeking to trade in foreign currencies can have limited access to certain currency markets due to a variety of factors including government regulations, adverse tax treatment, exchange controls, and currency convertibility issues. These limitations and restrictions impact the availability, liquidity and pricing of the financial instruments that are necessary for the portfolio to gain exposure to the currency markets, impairing the portfolio's ability to achieve its investment objective.

**Operational Risk** - In some instances, a portfolio can suffer a loss arising from shortcomings or failures in internal processes, people or systems, or from external events. Operational risk can arise from many factors ranging from routine processing errors to potentially costly incidents related to, for example, major systems failures.

**Private Investment Risk** - Investments in private investments, including debt or equity investments in operating and holding companies, investment funds, joint ventures, royalty streams, commodities, physical assets, and other similar types of investments can be highly illiquid and long-term. A portfolio's ability to transfer and/or dispose of private investments is expected to be highly restricted. BlackRock may not be able to obtain material information about the private investment that other investors obtain. Private investments are not subject to the same reporting and disclosure requirements as public companies, which may increase Valuation Risk for those investments.

**Portfolio Turnover Risk** - Active and frequent trading of securities and financial instruments in a portfolio can result in increased transaction costs, including potentially substantial brokerage commissions, fees, and other transaction costs. In addition, frequent trading is likely to result in short-term capital gains tax treatment. As a result of portfolio turnover, the performance of a portfolio can be adversely effected.

**Quantitative Model Risk** - When executing an investment strategy using various proprietary quantitative or investment models, securities or other financial instruments selected can perform differently than expected, or from the market as a whole, as a result of a model's component factors, the weight placed on each factor, changes from the factors' historical trends, and technical issues in the construction, implementation and maintenance of the models (e.g., data problems, software issues, etc.). There can be no assurance that a model will achieve its objective.

**Real Estate Risk** - Historically real estate has experienced significant fluctuations and cycles in value and local market conditions which result in reductions in real estate opportunities, value of real property interests and, possibly, the amount of income generated by real property. All real estate-related investments are subject to the risk attributable to, but not limited to: (i) inability to consummate investments on favorable terms; (ii) inability to complete renovation, expansion or development on advantageous terms; (iii) adverse government, environmental and tax regulations; (iv) leasing delays, tenant bankruptcies and low occupancy levels and lease rates; and (v) changes in the liquidity of real estate markets. Real estate investment strategies which employ leverage are subject to risks normally associated with debt financing, including the risk that: (a) cash flow after debt service will be insufficient to accumulate sufficient cash for distributions; (b) existing indebtedness (which is unlikely to be fully amortized at maturity) will not be able to be refinanced; (c) terms of available refinancing will not be as favorable as the terms of existing indebtedness; or

that the loan covenants will not be complied with. It is possible that property could be foreclosed upon or otherwise transferred to the mortgagee, with a consequent loss of income and asset value.

**Short Selling Risk** - Short sales in securities that it does not own exposes a portfolio to speculative exposure risks. If a portfolio makes short sales in securities that increase in value, the portfolio will lose value. Certain securities may not be available or eligible for short sales. Short selling involves the risks of: increased leverage, and its accompanying potential for losses; the potential inability to reacquire a security in a timely manner, or at an acceptable price; the possibility of the lender terminating the loan at any time, forcing the portfolio to close the transaction under unfavorable conditions; the additional costs that may be incurred; and the potential loss of investment flexibility caused by the obligation to provide collateral to the lender and set aside assets to cover the open position. There can be no assurance that a portfolio will be able to close out a short sale position at any particular time or at an acceptable price. Loss on short positions is subject to potential offset by investing short-sale proceeds in other investments.

**Small-Cap & Mid-Cap Risk** - Compared to large-capitalization companies, small-capitalization and mid-capitalization companies are less stable and more susceptible to adverse developments, and their securities can be more volatile and less liquid.

**U.S. Economic Risk** - The U.S. is a significant trading partner with other countries. Certain changes in the U.S. economy can have an adverse effect on the economy and markets of other countries.

**Underlying Fund Risk** - A portfolio investing in funds (underlying funds), includes, but is not limited to the performance of the underlying fund and investment risk of the underlying funds' investment, depending upon whether the underlying funds involve highly speculative investment techniques, including extremely high leverage, highly concentrated portfolios, workouts and startups, control positions and illiquid investments. In particular, the risks for a portfolio operating under a fund of funds structure include, but are not limited to, the following: the performance of the portfolio will depend on the performance of the underlying funds' investments; there can be no assurance that a multi-manager approach will be successful or diversified, or that the collective performance of underlying fund investments will be profitable; one or more underlying funds could be allocated a relatively large percentage of the portfolio's assets; there could be limited information about or influence regarding the activities of the underlying fund's investment advisers and underlying funds, like any other asset, may be subject to trading restrictions or liquidity risk. Portfolio investments in underlying funds will generally be charged the proportionate share of the expenses of investing in the underlying fund(s).

**Valuation Risk** - The net asset value of a portfolio as of a particular date may be materially greater than or less than its net asset value that would be determined if a portfolio's investments were to be liquidated as of such date. For example, if a portfolio was required to sell a certain asset or all or a substantial portion of its assets on a particular date, the actual price that a portfolio would realize upon the disposition of such asset or assets could be materially less than the value of such asset or assets as reflected in the net asset value of a portfolio. Volatile market conditions could also cause reduced liquidity in the market for certain assets, which could result in liquidation values that are materially less than the values of such assets as reflected in the net asset value of a portfolio.

**Volatility Risk** - The prices of a portfolio's investments can be highly volatile. Price movements of assets are influenced by, among other things, interest rates, general economic conditions, the condition of the financial markets, developments or trends in any particular industry, the financial condition of the issuers of such assets, changing supply and demand relationships, programs and policies of governments, and national and international political and economic events and policies.

## OPERATING EVENTS

Trade errors and other operational mistakes (“Operating Events”) occasionally may occur in connection with an Adviser’s management of funds and client accounts (“Portfolios”). The Advisers have policies and procedures that address identification and correction of Operating Events, consistent with applicable standards of care and client documentation. An Operating Event generally is compensable by an Adviser to a client or fund when it is a mistake (whether an action or inaction) in which the Adviser has, in the Adviser’s reasonable view, deviated from the applicable investment guidelines or the applicable standard of care in managing a Portfolio, subject to the considerations set forth below.

Operating Events may include, but are not limited to: (i) the placement of orders (either purchases or sales) in excess of the amount of securities intended to trade for a Portfolio; (ii) the purchase (or sale) of a security when it should have been sold (or purchased); (iii) the purchase or sale of a security not intended for the Portfolio; (iv) the purchase or sale of a security contrary to applicable investment guidelines or restrictions; (v) incorrect allocations of trades; and (vi) transactions with a non-authorized counterparty. Operating Events can also occur in connection with other activities that are undertaken by an Adviser and its affiliates, such as net asset value calculation, management fee calculations, calculations of carried interest or incentive fees, trade recording and settlement and other matters that are non-advisory in nature.

An Adviser makes its determinations regarding Operating Events pursuant to its policies on a case-by-case basis, in its discretion, based on factors it considers reasonable, including regulatory requirements, contractual obligations, and business practices. Not all Operating Events will be considered compensable mistakes. Relevant factors an Adviser considers when evaluating whether an Operating Event is compensable include, among others, the nature of the service being provided at the time of the event, specific applicable contractual and legal requirements and standards of care, whether an applicable investment objective or guideline was contravened, the nature of the client’s investment program, and the nature of the relevant circumstances.

Operating Events may result in gains or losses or could have no financial impact. With respect to Portfolios other than Private Investors and other SMA program accounts, clients or funds generally are entitled to retain any gain resulting from an Operating Event. Operating Events involving erroneous transactions in Private Investors accounts generally are corrected by moving the transaction out of the Private Investors client’s account and into a Private Investors omnibus error account maintained by MLPF&S (the “Omnibus Account”), and restoring the Private Investors client’s account to the position it would have been in had the event not occurred. Material gains in the Omnibus Account resulting from correction transactions promptly are donated to charity; non-material gains generally are netted with losses, and any resulting net gains periodically are donated to charity (i.e., BIM does not retain net gains in the Omnibus Account). Operating Events involving erroneous transactions in other SMA program accounts (i.e., non-Private Investors accounts managed by an Adviser in SMA programs sponsored by other firms) generally are corrected in accordance with the procedures established by the particular sponsor/custodian, which utilizes an omnibus account process similar to that used by BIM and MLPF&S for Private Investors accounts. Clients in such SMA programs should contact their program sponsors for information on how Operating Events are corrected in such programs.

When BlackRock determines that reimbursement by BlackRock is appropriate, the client or fund will be compensated as determined in good faith by BlackRock. BlackRock will determine the amount to be reimbursed, if any, based on what it considers reasonable guidelines regarding these matters in light of all of the facts and circumstances related to the Operating Event. In general, compensation is expected to be limited to direct and actual losses, which may be calculated relative to comparable conforming investments, market factors and benchmarks and with reference to related transactions and/or other factors BlackRock considers relevant. Compensation generally will not include any amounts or measures that BlackRock determines are speculative or uncertain.

## **Item 9 Disciplinary Information**

On April 25, 2017, BFA reached an agreement with the SEC resolving a matter regarding whether one BFA managed exchanged traded fund (the iShares MSCI Russia Capped ETF) was covered by certain exemptive relief the SEC previously granted BFA and other iShares exchange traded funds managed by BFA. BFA, which did not admit or deny any of the SEC's findings, agreed to resolve the matter for a civil monetary penalty of \$1,500,000.



## Item 10 Other Financial Industry Activities and Affiliations

BlackRock is a broad financial services organization. In some cases, the Advisers have business arrangements with related persons/companies that are material to the Advisers' advisory business or to their clients. In some cases, these business arrangements create the potential conflict of interest, or the appearance of a conflict of interest between the Adviser and a client. The services that BlackRock provides its clients through its Advisers or through investments in a BlackRock investment product, as well as related conflicts of interest, are discussed in Item 11 ("Code of Ethics, Participation or Interest in Client Transactions and Personal Trading") of this Brochure. Potential conflicts of interest are also discussed in other governing documents, including but not limited to in an OM and/or IMA.

### AFFILIATED BROKER-DEALERS

BlackRock Investments, LLC ("BRIL") and BlackRock Execution Services ("BES") are broker-dealers registered under the Exchange Act and are members of FINRA.

- BRIL is primarily engaged in the wholesale marketing of certain BlackRock US Funds to other registered broker-dealers, marketing Rule 529 municipal fund securities and the sale of certain other investment products to institutional investors. BRIL also acts as placement agent for certain Private Funds advised by the Advisers and BlackRock Institutional Trust Company, N.A. ("BTC"), and acts as the distributor for US iShares ETFs.
- BES provides brokerage services to certain transition accounts of BlackRock Investment Advisers that have been authorized or directed by the transition clients to use BES to the extent consistent with applicable laws.

### CFTC - COMMODITY POOL OPERATOR / COMMODITY TRADING ADVISOR

Certain Advisers serve as commodity pool operators and commodity trading advisors to accounts of clients.

- BFM, BIM, BFA and BAL are registered as commodity pool operators and commodity trading advisors.
- BCM is an exempt commodity pool operator and exempt commodity trading advisor.
- BIL is a registered commodity trading advisor.
- BSL is an exempt commodity pool operator.
- BAMNAL is an exempt commodity trading advisor.

Affiliates of the Advisers are registered or exempt from registration as commodity trading advisors or commodity pool operators. BTC is registered as a commodity trading advisor and a commodity pool operator. iShares Delaware Trust Sponsor LLC is a registered commodity pool operator and BlackRock Investment Management (UK) Limited, First Reserve Advisors, L.L.C. and First Reserve Energy Infrastructure Advisors, L.L.C. are exempt commodity pool operators and commodity trading advisors.

All of the non-exempt Advisers listed above are members of the National Futures Association (the "NFA"). The NFA and CFTC each administer a comparable regulatory system covering futures contracts, swaps and various other financial and derivative instruments in which certain investment management clients of BlackRock ("BlackRock Clients") invest

### AFFILIATED REGISTERED INVESTMENT ADVISERS

The Advisers have affiliates that are registered investment advisers with the SEC.

In April 2017 BlackRock Alternatives Advisors, LLC, an affiliate of the Advisers, registered with the SEC as an investment adviser. On June 2, 2017, BlackRock, Inc. acquired the energy infrastructure business of First Reserve Partners, L.P. and First Reserve Management, L.P. (together, "First Reserve") by acquiring 100% of the equity interests of the entities that control the general partners, and First Reserve Energy Infrastructure Advisors, L.L.C. and First Reserve Advisors, L.L.C., the investment advisers of the Energy Infrastructure Funds (the "Transaction"). Following the Transaction, First Reserve Energy Infrastructure Advisors, L.L.C. and First Reserve Advisors, L.L.C., became relying advisers (collectively, "Relying Advisers") to BlackRock Alternatives Management, LLC.

In addition to the Advisers, BlackRock Realty Advisors, Inc. (“BlackRock Realty”), FutureAdvisor, BlackRock Alternatives Management, LLC, First Reserve Advisors, L.L.C. and First Reserve Energy Infrastructure Advisors, L.L.C., wholly-owned subsidiaries of BlackRock, Inc., are investment advisers registered with the SEC under the Advisers Act.

BlackRock Realty specializes in advisory services with respect to investments in real estate and real estate-related debt investments which it invests in on behalf of privately-offered commingled investment funds and institutional separate accounts. FutureAdvisor specializes in digital investment advisory services, including portfolio optimization, rebalancing, and tax-loss harvesting strategies through its secure website: [FutureAdvisor.com](http://FutureAdvisor.com). BlackRock Alternatives Management, LLC, and its Relying Advisers, primary advisory services focus on alternative investment strategies, including global energy and natural resources industries, as well as the infrastructure sector.

### RELATIONSHIPS OR ARRANGEMENTS WITH AFFILIATES AND/OR RELATED PERSONS

BlackRock, Inc. is a publicly traded company incorporated in the State of Delaware. As of December 31, 2016, The PNC Financial Services Group, Inc. (together with its subsidiaries, “PNC”) owned approximately 22.0% of the total capital stock of BlackRock, Inc. and approximately 21.3% of BlackRock, Inc.’s voting common stock.

BAL, BFM, BIL, BCM, BIM, BFA, BSL, BAMNAL, BAMS, BlackRock Realty, BRIL, and BES are direct or indirect wholly-owned subsidiaries of BlackRock, Inc. BAL as of December 31, 2016 owned approximately 36.5% economic interest, and 4.9% voting interest in 52nd Street Capital Advisors LLC.

From time to time, PNC Capital Markets, LLC participates in underwritings of initial common and/or preferred share offerings of funds in the BlackRock Closed-End Complex. From time to time, Midland Loan Services, a division of PNC Bank, National Association, can act as primary servicer, master servicer and/or special servicer in respect of assets held by funds managed by BlackRock.

BTC, an indirect subsidiary of BlackRock, Inc., is a national banking association organized under the laws of the U.S., and operates as a limited purpose trust company. BTC provides investment management and fiduciary services for institutional client accounts, including trust accounts, collective trust funds and group trusts maintained by BTC, and other unregistered investment vehicles. BTC provides administration and securities lending services to certain registered and unregistered investment funds managed by BlackRock. BTC is also registered as a Municipal Advisor with both the SEC and the Municipal Securities Rulemaking Board.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in a joint venture, PennyMac Financial Services, Inc. (“PFSI”) and Private National Mortgage Acceptance Company, LLC (“PNMAC”). PFSI is a publicly traded financial services firm (NYSE: PFSI) with a focus on correspondent lending, and investing in and servicing residential mortgage assets. PFSI is the managing member of, and conducts most of its operations through PNMAC. PNMAC owns PNMAC Capital Management, LLC, an SEC registered investment adviser, that manages PennyMac Mortgage Investment Trust, a publicly traded REIT (NYSE: PMT), and other investment funds.

A subsidiary of BlackRock, Inc. and Chubb Limited (“Chubb”) partially funded the creation of a reinsurance company, ABR Reinsurance Capital Holdings Ltd. (together with its wholly owned subsidiary ABR Reinsurance Ltd., “ABR Re”), pursuant to which BlackRock has approximately a 9.9% ownership interest (“ABR Re Transaction”). Chubb is a publicly traded company whose securities are held in BlackRock Client accounts. The subsidiary of BlackRock, Inc. and Chubb have representation on the board of directors of ABR Re. An independent director of certain BlackRock US Funds also serves as an independent director of Chubb and has no interest or involvement in the ABR Re Transaction. Certain employees and executives of BlackRock have a less than ½ of 1% ownership interest in ABR Re. BFM manages the investment portfolio of ABR Re. ABR Re participates as a reinsurer with respect to a portfolio of reinsurance contracts written by subsidiaries of Chubb.

BlackRock, Inc. owns indirectly through BFM a non-controlling interest in a joint venture, Luminex Trading & Analytics LLC (“Luminex”). Luminex is an independent equity trading venue owned and operated by a consortium of leading investment management firms. It provides a platform for investment managers to trade large blocks of stock with other investment managers at a lower cost and uses transparent trading rules and protocols.

## Item 10 Other Financial Industry Activities and Affiliations

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in a joint venture, Alliance Partners, LLC. Alliance Partners, LLC is a financial services firm that manages BancAlliance, a bank-controlled cooperative, which helps member banks diversify loan portfolios, access a broader range of asset opportunities and manage their commercial real estate concentrations. A subsidiary of Alliance Partners, LLC is registered as an investment adviser.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in iCapital Networks ("iCapital"). iCapital is a financial technology platform that provides access to alternative investments for high-net-worth investors and their financial advisors. iCapital's platform provides combination of due diligence capabilities, technology and relationships with alternative asset managers to facilitate investments in hedge funds and private equity funds, including BlackRock. Certain executives of BlackRock serve on iCapital's Board of Directors. iCapital may serve as the managing member or general partner of, and/or other service provider to, certain investment funds managed by BlackRock.

Cachematrix Holdings, LLC is an indirect, wholly-owned subsidiary of BlackRock, Inc., that, together with its subsidiaries, provides technology to banks and other clients, facilitating online trading in money market funds (managed by BlackRock, as well as third party asset managers) and other products.

HLX Financial Holdings, LLC (known by its brand name, "Helix") is an indirect, wholly-owned subsidiary of BlackRock, Inc. Helix is a Charlotte, North Carolina-based company that provides advisory, valuation and analytics solutions to commercial real estate lenders and investors.

BlackRock Services India Private Limited is an indirect, wholly-owned subsidiary of BlackRock, Inc. based in Gurgaon, India that principally provides operational support, portfolio and fund administration services.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in a joint venture, DSP BlackRock Investment Managers Private Limited ("DSP India"). DSP India is a financial services company that serves as asset manager in India.

Within the guidance set forth under applicable law, the relevant no-action letter(s) and related SEC staff guidance, registered investment advisers are permitted to access the services of unregistered affiliates under prescribed conditions ("participating affiliates"). BlackRock Advisors (UK) Limited ("BALUK") is a participating affiliate of BFA. BlackRock Japan Co., Ltd. ("BlackRock Japan") is a participating affiliate of BFM and BIL. BlackRock Investment Management (Australia) Limited ("BlackRock Australia") is a participating affiliate of BFM and BAL. The prescribed conditions include, but are not limited to, the participating affiliate providing the SEC access to trading and other records, observing specific recordkeeping rules, submitting to jurisdiction of U.S. courts and cooperating with the SEC as it relates to accounts advised by BFA, BFM, BIL and BAL, for which BALUK, BlackRock Japan or BlackRock Australia, respectively, may provide services pursuant to the relevant participation agreement.

BIL is authorized and regulated by the Financial Conduct Authority, the independent financial services industry regulator in the United Kingdom, and has permission from the Financial Supervisory Service in South Korea to perform (a) Investment Advisory Services and (b) Discretionary Investment Services.

BAMNAL is located in Hong Kong and is licensed by the Securities and Futures Commission and Mandatory Provident Fund Schemes Authority of Hong Kong. The China Securities Regulatory Commission has granted BAMNAL licenses as a Qualified Foreign Institutional Investor and Renminbi Qualified Foreign Institutional Investor. While not its primary business, BAMNAL also provides real estate investment services which include the acquisition, disposition and supervision of management and improvement of real estate investments for its clients.

BSL is located in Singapore and licensed by the Monetary Authority of Singapore. BSL is licensed with the China Securities Regulatory Commission as Renminbi Qualified Foreign Institutional Investor.

BAMS is located in Switzerland and is registered as a management company with the Swiss Financial Market Supervisory Authority.

BFA, BAL, BSL and BAMNAL are licensed with the Securities and Exchange Board of India as a Foreign Portfolio Investor/Foreign Institutional Investors.

BlackRock uses BES to provide brokerage and other services on behalf of BlackRock's Clients in accordance with policies and procedures that are designed to provide for compliance with the requirements of (and BlackRock's duties under) the Advisers Act, Investment Company Act, the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), other laws and regulations and related relief, as applicable to the transaction. These policies and procedures, and the related laws and regulations, address the potential for conflicts of interest arising in connection with using an affiliate to provide trade execution services on behalf of such BlackRock Clients.

BIS develops indices against which index portfolios are passively managed. Certain of these indices are Underlying Indices of client accounts. Please see Item 8 ("Index Mandates") of this Brochure for more information.

### ***Securities Lending***

BlackRock, Inc. has three subsidiaries, BIM, BTC and BALUK that act as securities lending agents (collectively, "Lending Agents"). Lending on behalf of US Registered Funds is done by BTC and BIM pursuant to applicable SEC exemptive relief, enabling BIM and BTC to act as securities lending agent to, and receive a share of securities lending revenues from, such US Registered Funds. The US Registered Funds benefit from a borrower default indemnity ultimately provided by BlackRock, Inc. BTC and BIM also bear all operational costs directly related to securities lending, as well as the cost of borrower default indemnification. BALUK acts as lending agent solely to non-U.S. entities.

Depending on the arrangement, the U.S. domiciled Lending Agents and their affiliates may furnish investment supervisory services with respect to the reinvestment of cash collateral provided by securities borrowers to secure their obligations to the Lending Agents' clients. The U.S. domiciled Lending Agents, based on the arrangement, may be authorized to reinvest cash collateral on a discretionary basis in accordance with the investment objectives, policies, and guidelines set forth in a securities lending agency agreement or similar arrangement between the Lending Agent and its client. If permitted pursuant to guidelines, cash collateral can be invested in money market funds or other cash management vehicles sponsored or advised by BlackRock or a BlackRock affiliate, pursuant to applicable legal restrictions. In such cases, the client may bear (and BlackRock or a BlackRock affiliate may receive) any advisory or other relevant fees associated with such funds or cash management vehicles in addition to the fee paid for securities lending services. Securities lending fees are generally based on a percentage of securities lending revenue generated for each client, and are generally paid on a monthly basis in arrears.

When BlackRock acts as both Lending Agent and manager of cash collateral for the same client, there is a potential conflict of interest as a Lending Agent may have an incentive to increase the amount of securities on loan to maximize the amount of collateral it manages, instead of maximizing the overall revenue generated for the client from securities lending. Also, Lending Agent borrower default indemnification subjects BlackRock, Inc. to the risk of collateral shortfall upon counterparty default ("shortfall risk"). Management of the shortfall risk may affect the amount of securities lending activity the Lending Agents may conduct at any given point in time, impacting Clients differently by reducing the volume of lending opportunities for certain types of loans.

### ***Transition Management***

Certain BlackRock Investment Advisers offer TRIM services to institutional clients seeking to transition their portfolio holdings from one investment manager to another and/or from one investment strategy to another. Such investment manager can include the Advisers or an affiliate. Relevant BlackRock Investment Advisers give advice to TRIM clients regarding trading strategies, including recommending trading baskets of securities rather than individual securities when deemed to be in the best interest of the TRIM clients and to the extent consistent with applicable laws. BES provides brokerage services to transition accounts of BlackRock Investment Advisers that have been authorized or directed by the transition clients to use BES to the extent consistent with applicable laws.

### ***BlackRock Solutions®***

BlackRock Solutions® ("BRS"), a business unit within BlackRock, provides a broad range of risk management, investment accounting and trade processing tools to a variety of clients, including insurance companies, asset managers, pension funds, investment consultants, real estate investment trusts, commercial and mortgage banks,

savings institutions, government agencies, and central banks. Using proprietary technology, analytics, and product knowledge, BlackRock is able to assist these clients in measuring financial risks in their portfolios and across their lines of business on both the asset and liability sides of their balance sheets. Further, BlackRock offers independent assistance in the estimated valuation of complex securities, assets and derivatives, and can assist in developing investment and hedging strategies to meet specific client needs and constraints. BRS makes available its proprietary enterprise trading system and risk reporting tools to other firms or companies. BRS also provides advisory services with respect to regulatory capital and balance sheet strategies and risk frameworks for capital market exposures, as well as enterprise risk management strategies.

### ***Client Solutions***

Client Solutions develops and manages multi-asset separate account strategies for institutional clients, including strategies that permit BlackRock to allocate all or a portion of the portfolio management to non-affiliated investment advisers selected by BlackRock. Depending on a client's preference, such multi-asset strategies can invest in both individual securities and pooled investment vehicles. Before allocating client assets to any such non-affiliated investment advisers, BlackRock conducts due diligence with respect to such advisers' investment strategies and objectives, compliance policies and procedures, operational capabilities and past performance. In addition, from time to time, Client Solutions provides analytics-based advice and portfolio analysis to institutional clients that have themselves implemented multi-asset strategies, which may or may not allocate assets to BlackRock or its affiliates, to manage.

### ***Financial Markets Advisory***

BlackRock's Financial Markets Advisory Group ("FMA"), offers clients advice on and/or execution of regulatory capital and balance sheet strategies and/or other investment management and risk management services to manage clients' capital markets exposures and businesses. FMA focuses on delivering capital markets, risk management, advisory and investment management capabilities to advise holders of distressed assets and other complex, difficult to value or special-situation portfolios, and assist such holders with managing, disposing of, restructuring and valuing their portfolios, as well as providing related general advisory and investment advisory services to official institutions and government agencies.



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions and Personal Trading**

BlackRock Investment Advisers make decisions for their clients in accordance with their fiduciary obligations to such clients. BlackRock is a worldwide asset management, risk management, investment system outsourcing and financial services organization, and a major participant in global financial and capital markets. PNC, one of the largest diversified financial services organizations in the U.S., has a significant economic interest in BlackRock.

As a global provider of investment management, risk management and advisory services to institutional and retail clients, BlackRock engages in a broad spectrum of activities, including sponsoring and managing a variety of public and private investment funds, Funds of Funds and separate accounts across fixed income, cash management, equity, multi-asset, alternative investment and real estate strategies, providing discretionary and non-discretionary financial advisory services, providing enterprise trading systems, risk analytics, investment accounting and general advisory services under the BRS brand and engaging in certain broker-dealer activities, transition management services, mortgage servicing and other activities. BlackRock acts as, among other things, an investment manager, investment adviser, broker dealer and under certain circumstances an index provider; additionally, PNC may act as, among other things, an investor, investment banker, commercial banker, research provider, investment adviser, custodian, administrator, trustee, financier, adviser, market maker, placement agent, proprietary trader, prime broker, commodity firm, pricing vendor, solicitor, broker, dealer, transfer agent, record keeper, alternative trading systems ("ATS"), electronic communication network ("ECN") authorized participant for US iShares ETFs, derivative or swap counterparty, underwriter, municipal securities dealer, index provider, lender, futures commission merchant, or agent. Midland Loan Servicing, a subsidiary of PNC, acts as primary servicer, master servicer, and special servicer to BlackRock Clients.

BlackRock, makes payments, out of its own profits or other sources, to affiliated or unaffiliated financial institutions, broker-dealers or other entities for distribution and sales support activities, including participation in marketing activities, educational programs, conferences, and technology development and reporting, or sub-accounting, administrative, shareholder processing or other services related to shares or shareholders of investment companies and other funds for which BlackRock provides investment advisory services, or for other services or activities that facilitate investments by BlackRock Clients in such funds. These payments would be in addition to any payments made or fees paid directly by the investment companies or other funds, and recipients of such payments in some instances are affiliates of PNC.

Each of BlackRock and PNC have direct and indirect interests in the global fixed income, currency, commodity, equity, and other markets in which BlackRock Clients invest. As a result, BlackRock and its directors, managers, members, officers, and employees (collectively, the "BlackRock Group"), as well as PNC and its respective other affiliates, directors, partners, trustees, managers, members, officers, and employees (collectively, "PNC Affiliates"), including those involved in the management, sales, investment activities, business operations, or distribution of BlackRock's services and products, are engaged in businesses and have interests other than that of managing the assets of BlackRock Clients. These activities and interests include potential multiple advisory, transactional, financial, and other interests in securities, instruments, and companies that are directly or indirectly purchased or sold by or on behalf of BlackRock Clients by BlackRock and other persons.

As a result of the various activities and interests of the BlackRock Group and of PNC Affiliates as described below, BlackRock Clients could have multiple business relationships with members of the BlackRock Group and the PNC Affiliates and BlackRock Investment Advisers will, on behalf of BlackRock Clients, invest in, engage in transactions with, make voting decisions with respect to, or obtain services from entities for which the BlackRock Group and PNC Affiliates perform, or seek to perform, risk management, investment system outsourcing, financing, investment banking, lending, loan servicing, or other services. BlackRock Clients could also likely undertake transactions in securities in which one or more PNC Affiliates make a market or otherwise have direct or indirect interests. Although the relationships and activities of the BlackRock Group and the PNC Affiliates tend to offer attractive opportunities and services to BlackRock Clients, such relationships and activities also give rise to potential conflicts of interest between or among the BlackRock Group and BlackRock Clients or have other negative effects on BlackRock Clients. Additionally, consistent with applicable law, BlackRock, PNC and their respective affiliates and personnel can receive



greater compensation or greater profit in connection with an account for which BlackRock serves as an adviser than with an account advised by an unaffiliated investment adviser. Differentials in compensation result from, among other reasons, BlackRock paying a portion of its advisory fee to its affiliate or other compensation arrangements, including for portfolio management, brokerage transactions, or account servicing. Any differential in compensation creates a potential financial incentive on the part of BlackRock, PNC, their affiliates and personnel to recommend BlackRock over unaffiliated investment advisers, to effect transactions differently in one account over another, or to favor accounts in which they have more significant interests over those in which they have a lesser (or no) interest.

The BlackRock Investment Advisers manage the assets of BlackRock Clients in accordance with the investment mandate selected by each BlackRock Client and applicable law, and will seek to give advice to, and make investment decisions for, such BlackRock Client that the BlackRock Investment Adviser believes to be in the best interests of such BlackRock Client. However, from time to time, investment allocation decisions are made which adversely affect the size or price of the assets purchased or sold for a BlackRock Client and the results of the investment activities of a BlackRock Client may differ significantly from the results achieved by the BlackRock Investment Advisers for other current or future BlackRock Clients. Thus, the management of numerous accounts for BlackRock Clients and other services provided by the BlackRock Investment Advisers creates a number of potential conflicts of interest. Additionally, regulatory and legal restrictions (including those relating to the aggregation of positions among different funds and accounts) and BlackRock's internal policies and procedures restrict certain investment activities of BlackRock Investment Advisers for BlackRock Clients.

These and other potential conflicts are discussed generally herein or in the relevant IMA, offering documents and/or governing documents of the investment funds managed or served by the various BlackRock Investment Advisers, which should be reviewed in conjunction with any investment in that fund. Given the interrelationships among the BlackRock Group and PNC Affiliates and the changing nature of such firms' businesses, affiliations and opportunities, as well as legislative and regulatory developments, there may be other or different potential conflicts that arise in the future or that are not covered by this discussion. As a fiduciary to the BlackRock Clients, however, BlackRock is committed to putting the interests of BlackRock Clients ahead of its own and those of its PNC Affiliates in the provision of investment management and advisory services.

### **BLACKROCK'S GLOBAL PERSONAL TRADING POLICY AND OTHER ETHICAL RESTRICTIONS**

BlackRock's and the Advisers' directors, officers, and employees buy, sell, and hold for their own and their family members' accounts public securities, private securities, and other investments in which such BlackRock personnel have a pecuniary interest, whether because they are also bought, sold, or held for BlackRock Clients or through accounts (or investments in funds) managed by BlackRock Investment Advisers or otherwise. As a result of differing trading and investment strategies or constraints, positions taken by BlackRock directors, officers, and employees can be the same as or different from, or made contemporaneously or at different times than, positions taken for BlackRock Clients.

As these situations involve potential conflicts of interest, BlackRock has adopted policies and procedures relating to personal securities transactions, insider trading and other ethical considerations, including the Global Personal Trading Policy in accordance with Rule 17j-1 under the Investment Company Act and Rule 204A-1 under the Advisers Act (the "Rules"). These policies and procedures are intended to identify and prevent actual conflicts of interest with clients and to resolve such conflicts appropriately if they do occur.

In conformity with the Rules, the Global Personal Trading Policy contains provisions regarding employee personal trading and, reporting requirements that are designed to address potential conflicts of interest that might interfere or appear to interfere with making decisions in the best interest of BlackRock Clients, and together with BlackRock's Code of Business Conduct and Ethics (referred to collectively as the "Code"), requires employees to comply with the applicable federal securities laws, as well as fiduciary principles applicable to BlackRock's business, including that employees must avoid placing their own personal interests ahead of BlackRock Clients' interests.

The Global Personal Trading Policy requires that employees at BlackRock conduct all of their personal investment transactions in a manner that is consistent with applicable federal securities laws, the BlackRock Global Insider Trading Policy and other policies of BlackRock. These requirements include reporting of personal investment accounts, pre-clearance of personal trading transactions, as well as reporting investment transactions. The Global

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions and Personal Trading**

Personal Trading Policy also generally prohibits employees from acquiring securities in initial public offerings, and contains prohibitions against profiting from short-term trading, subject to very limited exceptions. The Global Personal Trading Policy also imposes “blackout” periods on certain employees, including particular portfolio management personnel, prohibiting transactions in certain securities during time periods surrounding transactions in the same securities by BlackRock Client accounts. Moreover, the Global Personal Trading Policy and other BlackRock policies contain provisions that are designed to prevent conflicts relating to the use of inside information and to participating in outside activities.

Any member of the BlackRock Group covered by the Code who fails to observe its requirements or those contained in related BlackRock policies and procedures is subject to potential remedial action. BlackRock will determine on a case by case basis what remedial action should be taken in response to any violation, including potential voiding or reversal of a trade, the cost of which will be borne by the employee or owner of the account or limiting an employee’s personal trading for some period of time. The Global Personal Trading Policy will be made available to a BlackRock Client or prospective client upon request.

### **OUTSIDE ACTIVITIES**

Members of the BlackRock Group have a duty to act solely in the interest of BlackRock’s Clients; as such BlackRock’s Global Outside Activity Policy requires that BlackRock employees obtain approval before engaging in any outside activities so that BlackRock has the opportunity to consider whether such activities create actual or potential conflicts of interest. The Global Outside Activity Policy is intended to identify activities that have the potential to conflict with an employee’s role at BlackRock and/or BlackRock’s activities.

### **POLITICAL CONTRIBUTIONS**

Pursuant to BlackRock’s U.S. Political Contributions Policy - Global, which governs making or soliciting political contributions and engaging in political activities in the U.S., BlackRock, Inc., and its employees are prohibited from making any U.S. political contributions or charitable contributions solicited by a public official for the purpose of influencing a particular act by a BlackRock Client or potential client, a U.S. public official or his or her agency in connection with BlackRock’s business. However, employees are permitted to make personal U.S. political contributions in accordance with the requirements and restrictions of applicable law and BlackRock’s policies. To help comply with SEC rules and U.S. state and local pay-to-play rules, employees must pre-clear and obtain prior approval before they (or their spouse or their dependent children) make any contributions (i.e., any monetary contribution or contribution of goods or services) to a political candidate, government official, political party or political action committee (“PAC”) in the U.S.

The BlackRock PAC, a non-partisan political action committee, was established under a subsidiary of BlackRock, Inc. and is supported voluntarily by eligible U.S. employees who pool their resources to help elect U.S. federal candidates who, as determined by the PAC’s Board of Directors, share BlackRock’s values and goals.

### **POTENTIAL CONFLICTS RELATING TO ADVISORY ACTIVITIES**

The results of the investment activities provided to a BlackRock Client can differ significantly from the results achieved by BlackRock Investment Advisers for other current or future BlackRock Clients. BlackRock Investment Advisers will manage the assets of a BlackRock Client in accordance with the investment mandate selected by such BlackRock Client. However, members of the BlackRock Group (including BlackRock Investment Advisers), as well as PNC Affiliates (to the extent they have independent relationships with BlackRock Clients), may give advice and take action with respect to their own account, any other BlackRock Client or, in the case of a PNC Affiliate, their own accounts or a client of a PNC Affiliate, that competes or conflicts with the advice a BlackRock Investment Adviser may give to, or an investment action a BlackRock Investment Adviser may take on behalf of, a BlackRock Client (or a group of BlackRock Clients), or advice that may involve different timing than that of a BlackRock Client. The potential conflicts include, in particular, members of the BlackRock Group, the PNC Affiliates and one or more BlackRock Clients buying or selling positions while another BlackRock Client is undertaking the same or a differing, including potentially opposite, strategy. Similarly, BlackRock Investment Advisers’ management of BlackRock Client accounts may benefit members of the BlackRock Group and PNC Affiliates, including, to the extent permitted by applicable law, investing BlackRock Client accounts directly or indirectly in the securities of companies in which a member of the BlackRock Group, or other BlackRock Client, or a PNC Affiliate, for itself or its clients, has an equity, debt, or other interest. In addition, to the extent permitted by applicable law, BlackRock Clients may engage in

investment transactions which may result in other BlackRock Clients, or proprietary or client accounts of a PNC Affiliate, being relieved of obligations or otherwise have to divest or cause BlackRock Clients to have to divest certain investments. In some instances, the purchase, holding, and sale, as well as voting of investments by BlackRock Clients may enhance the profitability or increase or decrease the value of a BlackRock Group member's or other BlackRock Clients' own investments in, or of the investments in a PNC Affiliate's proprietary or client account with respect to such companies. This gives rise to potential conflicts of interest.

***Financial or Other Interests in Underlying Funds***

Funds of Funds or other accounts managed by an Adviser often acquire a financial interest in certain underlying funds which generally will, but not always include direct or indirect receipt of a portion of any management or performance-based fees paid by the underlying funds to their respective general partner, managing member, or investment adviser. These interests can involve additional rights such as board representation or other means to influence the management or business decisions of such underlying fund. These relationships create the potential for conflicts of interest between Funds of Funds or accounts receiving such interests and other funds or accounts managed by an Adviser.

***Cross Trades***

In certain circumstances, BlackRock Investment Advisers effect purchases and sales between BlackRock Clients or clients of affiliates ("cross trades") if BlackRock Investment Advisers believe such transactions are appropriate based on each party's investment objectives and guidelines, subject to applicable law and regulation (but are not required to effect such cross-trades). In this regard, BlackRock maintains a cross-trading program covering various strategies pursuant to which securities are bought and sold among BlackRock Clients. Cross trades for accounts subject to ERISA are made in accordance with applicable U.S. Department of Labor ("DOL") regulations and relevant exemptions. Where a US Registered Fund participates in a cross trade, the Advisers will comply with the US Registered Fund's procedures adopted pursuant to Rule 17a-7 under the Investment Company Act and related regulatory authority. BlackRock Investment Advisers seek to assure that the price used in a cross trade is fair and appropriate, and in keeping with, or as required by the relevant regulations.

In addition, a BlackRock Client account may enter into "agency cross transactions," in which a member of the BlackRock Group may act as broker for such BlackRock Client account and for the other party to the transaction, to the extent permitted under applicable law and subject to the terms of the governing documents of such BlackRock Client account. In such cases, the relevant BlackRock Investment Adviser and such affiliate may have a potentially conflicting division of loyalties and responsibilities regarding both parties to the transaction. The authority of the BlackRock Investment Advisers to conduct such agency cross-transactions is subject to the right of the BlackRock Client account investors to revoke such authority by the affirmative vote of a majority of those BlackRock Client account investors who are not directly or indirectly affiliated with the relevant BlackRock Investment Adviser, voting as a single class or, in the case of certain BlackRock Client accounts, the approval of the respective advisory boards of such BlackRock Client accounts. To the extent that any provision of Section 11(a) of the Exchange Act or any of the rules promulgated thereunder is applicable to any transactions effected by the relevant BlackRock Investment Adviser, such transactions will be effected in accordance with the requirements of such provisions and rules.

***Inconsistent Investment Positions and Timing of Competing Transactions***

From time to time, BlackRock takes an investment position or action for one or more accounts that is different from, or inconsistent with, an action or position taken for one or more other accounts having similar or differing investment objectives, resulting in potential adverse impact, or in some instances benefit, to one or more affected accounts. For example, a BlackRock Client may buy a security and another BlackRock Client may establish a short position in that same security. The subsequent short sale could result in a decrease in the price of the security which the first BlackRock Client holds. Conversely, a BlackRock Investment Adviser may establish a short position in a security for a BlackRock Client and another BlackRock Investment Adviser may buy that same security for a different BlackRock Client. The subsequent purchase may result in an increase of the price of the underlying position in the short sale exposure to a BlackRock Client's detriment. Similarly, transactions in investments by one or more BlackRock Clients and members of the BlackRock Group may have the effect of diluting or otherwise disadvantaging the values, prices or investment strategies of another BlackRock Client, particularly, but not limited to, in small capitalization, emerging market, or less liquid strategies. This may occur when portfolio decisions regarding a BlackRock Client account are based on research or other information that is also used to support portfolio decisions for other client accounts. When

one BlackRock Investment Adviser implements a portfolio decision or strategy ahead of, or contemporaneously with, similar portfolio decisions or strategies of another BlackRock Investment Adviser (whether or not the portfolio decisions emanate from the same research analysis or other information), market impact, liquidity constraints, or other factors could result in one or more BlackRock Clients receiving less favorable trading results, the costs of implementing such portfolio decisions or strategies could be increased or such BlackRock Clients could otherwise be disadvantaged. On the other hand, potential conflicts also arise when portfolio decisions regarding a BlackRock Client benefit other BlackRock Clients, for example, where the sale of a long position or establishment of a short position for a BlackRock Client decreases the price of the same security sold short by (and therefore benefit) a BlackRock Group member or other BlackRock Clients, or the purchase of a security or covering of a short position in a security for a BlackRock Client results in an increase in the price of the same security held by (and therefore benefit) a BlackRock Group member or other BlackRock Clients.

Under certain circumstances, if a BlackRock Client (or a group of BlackRock Clients) invests in a transaction in which one or more other BlackRock Clients are expected to participate, or already have made or will seek to make, an investment, such BlackRock Clients (or groups of BlackRock Clients) may have conflicting interests and objectives in connection with such investments, including with respect to views on the operations or activities of the portfolio company involved, the targeted returns from the investment and the timeframe for, and method of, exiting the investment. For example, the BlackRock Investment Advisers' decision on behalf of other client accounts to sell, redeem from, or otherwise liquidate a security in which a BlackRock Client account is invested may adversely affect such BlackRock Client account, including by causing such investment to be less liquid or more concentrated, or by causing such BlackRock Client account to lose the benefit of certain negotiated terms. Conflicts will also arise in cases where different BlackRock Clients (or groups of BlackRock Clients) invest in different parts of an issuer's capital structure, including circumstances in which one or more BlackRock Clients own private securities or obligations of an issuer and other BlackRock Clients own public securities of the same issuer. For example, a BlackRock Client (or group of BlackRock Clients) acquiring a loan, loan participation, or loan assignment of a particular borrower in which one or more other BlackRock Clients have an equity investment. In addition, different BlackRock Clients investing in securities of an issuer that have different voting rights, dividend or repayment priorities or other features that could be in conflict with one another. In negotiating the terms and conditions of any such investments, or any subsequent amendments or waivers, the BlackRock Investment Advisers' interests, BlackRock Client (or group of BlackRock Clients) interests, and/or the interests of one or more other BlackRock Clients could conflict. If an issuer in which a BlackRock Client (or group of BlackRock Clients) and one or more other BlackRock Clients hold different classes of securities (or other assets, instruments or obligations issued by such issuer) encounters financial problems, decisions over the terms of any workout will raise conflicts of interest (including, for example, conflicts over proposed waivers and amendments to debt covenants). For example, a debt holder who could be paid in full likely will be better served by a liquidation of the issuer, whereas an equity holder would be better served by a reorganization that holds the potential to create value for the equity holders. Any of the foregoing conflicts of interest will be discussed and resolved on a case-by-case basis. Any such discussions will take into consideration the interests of the relevant BlackRock Clients, the circumstances giving rise to the conflict and applicable laws. When considering whether to pursue applicable claims on behalf of BlackRock Clients, BlackRock considers various factors, including the cost of pursuing the claim and the likelihood of the outcome, and may not pursue every potential claim. BlackRock Clients (and investors in Private Funds) should be aware that conflicts will not necessarily be resolved in favor of their interests. There can be no assurance that any actual or potential conflicts of interest will not result in a particular BlackRock Client or group of BlackRock Clients receiving less favorable investment terms in certain investments than if such conflicts of interest did not exist.

Similarly, BlackRock, through BRS and other business units, may advise entities regarding estimated valuation, risk management, transition management, and potential restructuring or disposition activities in connection with their proprietary or client investment portfolios. Such activities create potential conflicts of interest, as BlackRock, on behalf of BlackRock Clients, may seek to purchase securities or other assets from the foregoing portfolios and may engage, without limitation, in related activities to bid down the price of assets in such portfolios, which may have an adverse effect on those portfolios.



***Conflicts Relating to Portfolio Management of Various Accounts***

BlackRock Investment Advisers make decisions for BlackRock Clients based on the investment mandates selected by such BlackRock Clients. In doing so, as a result of similarities or differences in such mandates or otherwise, BlackRock Investment Advisers have potential conflicts in connection with the investments of, and transactions effected for, BlackRock Clients, including in situations in which members of the BlackRock Group have a pecuniary or investment interest. Certain clients are limited by rules issued by regulators or self-regulatory organizations, such as short sale limits and trading halts. For additional information regarding conflicts relating to side-by-side management, please refer to Item 6 (“Performance-Based Fees and Side-By-Side Management”) and “Side-By-Side Management” in this Item 11 (“Code of Ethics, Participation or Interest in Client Transactions and Personal Trading”) of this Brochure.

**SIDE-BY-SIDE MANAGEMENT**

Side-by-side management by BlackRock Investment Advisers of US Registered Funds, separate accounts, institutional accounts, SMA program accounts, Private Funds and collective trust fund also involve potential conflicts of interest, including those associated with any differences in fee structures, as well as other pecuniary and investment interests the BlackRock Group may have in an account managed by BlackRock. US Registered Funds and SMA program accounts, for example, generally pay management fees based on a fixed percentage of assets under management, whereas institutional accounts and Private Funds often have more varied fee structures, including a combination of asset- and performance-based compensation. The prospect of achieving higher compensation from a Private Fund or institutional account than from a US Registered Fund or SMA program account results in potential incentive for the applicable BlackRock Investment Adviser to favor the Private Fund or institutional account over the US Registered Fund or SMA program account when, for example, placing securities transactions that the applicable BlackRock Investment Adviser believes could more likely result in favorable performance or engaging in cross trades. Similarly, other incentives include where BlackRock or its affiliates or employees have a significant proprietary investment in a fund or account, and where a BlackRock Investment Adviser has an incentive to favor such a fund or account to the detriment of other funds or accounts. BlackRock’s policies and procedures stress that investment decisions are to be made without consideration of BlackRock’s or its employees’ pecuniary or investment interests but, instead, in accordance with BlackRock’s or an Adviser’s (or either of their personnel’s) fiduciary duties to its client accounts. For additional information regarding side-by-side management, please refer to Item 6 (“Performance-Based Fees and Side-by-Side Management”) of this Brochure.

In certain situations a BlackRock Investment Adviser can influence the structure of an underlying portfolio investment for tax purposes. Such structuring may not benefit all accounts under management. The BlackRock Investment Adviser will seek to structure the underlying portfolio in a way that is fair under the circumstances but there is no guarantee a particular client account will not be harmed. Under certain circumstances a BlackRock Investment Adviser is required to sell or exit an investment on behalf of a BlackRock Client at the direction of the BlackRock Client or due to a need for liquidity of a BlackRock Client, so as to meet the ongoing obligations of the BlackRock Client. Such transactions potentially are not in the best interests of all BlackRock Clients and could result in a reduced sales price from current market values.

**MANAGEMENT OF INDEX FUNDS**

BlackRock provides investment advisory services to a series of US Registered Funds and other pooled investment vehicles, including those commonly referred to as index funds, whose investment objectives are to provide investment results, before fees and expenses, which correspond generally to the price and yield performance of its Underlying Index. The Underlying Index generally is developed by an index provider that is not affiliated with BlackRock, but in some circumstances, BIS is the index provider. Please see Item 8 (“Index Mandates”) for more information. Index funds seek to track the performance of securities indices and often use the name of the index in the fund name. Index providers are paid licensing fees for use of their index or index name. Where BIS is the index provider, BlackRock pays BIS licensing fees for use of a BIS Index or index name when permissible under applicable law.

While attempting to have an index fund’s performance track its Underlying Index (subject to position limits and other constraints), it is possible that, consistent with applicable law, BlackRock trades in securities issued by an affiliate that are included in the index fund’s Underlying Index.

**CERTAIN PRINCIPAL TRANSACTIONS IN CONNECTION WITH THE ORGANIZATION OF A PRIVATE FUND AND BLACKROCK US FUND**

Subject to the terms of the governing documents of the relevant BlackRock Client account, a member of the BlackRock Group may enter into “principal transactions” with a BlackRock Client account within the meaning of Section 206(3) of the Advisers Act in which such member of the BlackRock Group acts as principal for its own account with respect to the sale of a security or other asset to, or purchase of a security or other asset from, such BlackRock Client account. Principal transactions will be completed in compliance with applicable law and the terms of the governing documents of the relevant BlackRock Client account. In analyzing such principal transactions, the applicable BlackRock Investment Adviser will have a conflict between acting in the best interests of a BlackRock Client account and assisting itself or its affiliates by selling or purchasing a particular security.

On occasion and subject to applicable law and a fund’s governing documents, BlackRock or a related person (including its affiliates or its officers, directors or employees) purchases investments on behalf of and in anticipation of opening a Private Fund for investment. Such investments are transferred to the Private Fund. Generally, to the extent permitted by law, the Private Fund pays a market rate of interest and purchases the investment at cost. Since prior to transfer, such investments would be owned by BlackRock or a related person, conflicts of interest arise regarding the decision of whether or not to transfer such investments and the timing of such transfers. In addition, from time to time, BlackRock or a related person, in order to provide initial investment capital, holds a temporary proprietary interest for a period of time after the inception of a Private Fund. BlackRock’s or the related person’s disposition of such seed investment can have an impact on the value or liquidity of such Private Fund. More information on these arrangements can be found in the offering documents of the particular Private Fund.

From time to time, BlackRock or a related person, in order to provide initial investment capital, holds a temporary proprietary interest for a period of time after the inception of a BlackRock US Fund. When BlackRock or the related person disposes of their interest, the shares are not permitted to be sold, directly or indirectly to clients of BlackRock. In addition, BlackRock’s or the related person’s disposition of shares can have an impact on the price or liquidity of the shares being sold.

**POTENTIAL RESTRICTIONS AND CONFLICTS RELATING TO INFORMATION POSSESSED OR PROVIDED BY BLACKROCK**

***Availability of Proprietary Information***

In connection with the activities of BlackRock, Inc. and BlackRock Investment Advisers, certain persons within the BlackRock Group receive information regarding proposed investment activities for BlackRock and BlackRock Clients that is not generally available to the public. Also, BlackRock Investment Advisers have access to certain fundamental analyses, research and proprietary technical models developed internally or by other members of the BlackRock Group, PNC Affiliates, certain third-parties and their respective personnel. There will be no obligation on the part of such persons or any BlackRock Investment Adviser, to make available for use by a BlackRock Client, or to effect transactions on behalf of a BlackRock Client on the basis of, any such information, strategies, analyses or models known to them or developed in connection with their own proprietary or other activities. In many cases, such persons will be prohibited from disclosing or using such information for their own benefit or for the benefit of any other person, including BlackRock Clients. In other cases, fundamental analyses, research and proprietary models developed internally are used by various BlackRock Investment Advisers and personnel on behalf of different BlackRock Clients, which could result in purchase or sale transactions in the same security at different times (and could potentially result in certain transactions being made by one portfolio manager on behalf of certain BlackRock Clients before similar transactions are made by a different portfolio manager on behalf of other BlackRock Clients), or could also result in different purchase and sale transactions being made with respect to the same security. Further information regarding inconsistent investment positions and timing of competing transactions is set forth in “Potential Conflicts Relating to Advisory Activities” in Item 11 (“Code of Ethics, Participation or Interest in Client Transactions and Personal Trading”) of this Brochure. Similarly, one or more BlackRock Clients could have, as a result of receiving client reports or otherwise, access to information regarding BlackRock Investment Advisers’ transactions or views, including views on voting proxies, which are not available to other BlackRock Clients, and may act on such information through accounts managed by persons other than a BlackRock Investment Adviser. The foregoing transactions may negatively impact BlackRock Clients through market movements or by decreasing the pool of available securities or liquidity. BlackRock Clients could also be adversely affected when cash flows and market



movements result from purchase and sale transactions, as well as increases of capital in, and withdrawals of capital from, accounts of other BlackRock Clients. These effects can be more pronounced in thinly traded securities and less liquid markets.

In addition, BlackRock Investment Advisers have no obligation to seek information from or share with any BlackRock Client any information, investment strategies, opportunities, or ideas known to members or affiliates of the BlackRock Group or developed or used in connection with other clients or activities. For example, it is possible that a client account invests in securities of companies with which an affiliate has or is trying to develop investment banking relationships, as well as securities of entities in which BlackRock, PNC or one of their affiliates has significant debt or equity investments, in which an affiliate makes a market or in which an affiliate provides or anticipates someday providing research coverage. Such investments could cause conflicts between the interests of a client account and the interests of other clients of BlackRock or another affiliate, or cause BlackRock to be exposed to material non-public information about an issuer. Moreover, conflicts of interest could arise where members and personnel of the BlackRock Group, including BlackRock Investment Advisers' personnel or other BlackRock personnel advising or otherwise providing services to BlackRock Clients, have possession of information not available to all BlackRock personnel, and such personnel act on the basis of such information, or are required to refrain from acting, in ways that have adverse effects on BlackRock Clients.

***Material Non-Public Information/Insider Trading***

BlackRock Group receives material non-public information in the ordinary course of its business. This is information that is not available to other investors or other confidential information which, if disclosed, would likely affect an investor's decision to buy, sell or hold a security. This information is received voluntarily and involuntarily and under varying circumstances, including, but not limited to, upon execution of a non-disclosure agreement, as a result of serving on the board of directors of a company, serving on ad hoc or official creditors' committees and participation in risk, advisory or other committees for various trading platforms, clearinghouses and other market infrastructure related entities and organizations. Under applicable law, members of the BlackRock Group are generally prohibited from disclosing or using such information for their personal benefit or for the benefit of any other person, regardless of whether that person is a BlackRock Client.

Accordingly, should a member of the BlackRock Group obtain, either voluntarily or involuntarily, material non-public information with respect to an issuer, it is generally prohibited from communicating that information to, or using that information for the benefit of, BlackRock Clients, which could limit the ability of BlackRock Clients to buy, sell, or hold investments and result in an underlying security or investment being priced inconsistently across BlackRock Clients. BlackRock has no obligation or responsibility to disclose the information to, or use such information for the benefit of, any person (including BlackRock Clients), even if requested by BlackRock or its affiliates and even if failure to do so would be detrimental to the interests of that person. BlackRock has adopted a Global Insider Trading Policy, which establishes procedures reasonably designed to prevent the misuse of material non-public information by BlackRock and its personnel. Under the Global Insider Trading Policy, BlackRock Investment Advisers generally are not permitted to use material non-public information obtained by any department or affiliate of BlackRock in the course of its business activities or otherwise, in effecting purchases and sales in securities transactions for BlackRock Clients or for their personal accounts.

BlackRock also has adopted policies establishing information barriers to minimize the likelihood that particular investment advisory units or teams will come into possession of material non-public information known by some other unit or team at BlackRock and thereby also minimizing the likelihood that a particular unit or team will be precluded from taking action on behalf of its clients. Nonetheless, the investment flexibility of one or more of the BlackRock Investment Advisers or business units on behalf of BlackRock Clients will be constrained as a consequence of BlackRock's policies regarding material non-public information and insider trading and related legal requirements.

Consequently, BlackRock Investment Advisers' investment activities likely will be impacted by receipt of such information, even if a failure to act on such information is ultimately detrimental to BlackRock Clients. In addition, use of such information would also be prohibited by BlackRock's Global Insider Trading Policy.

From time to time, certain BlackRock employees use paid expert networks, (subject to the BlackRock policies regarding the handling and restricted use of material non-public information). BlackRock has adopted specific policies and procedures to prevent and address the receipt of any material non-public information from such expert networks.

**POTENTIAL CONFLICTS THAT ARISE WITH RESPECT TO SERVICES PROVIDED BY OR THROUGH VARIOUS BLACKROCK ENTITIES AND THE PNC AFFILIATES**

Subject to applicable law, BlackRock Clients have a choice of engaging the securities and futures brokerage or dealer, custodial, derivatives, trustee, agency, mortgage servicing, lending, banking, advisory services and other commercial services of, or investing in one of a spectrum of investment products provided or sponsored by, another BlackRock Investment Adviser, other members of the BlackRock Group or a PNC Affiliate. Additionally, the BlackRock Investment Advisers rely on information from, or utilize the services provided by, such persons in managing a BlackRock Client's account. These services and certain other relationships among various members of the BlackRock Group, PNC Affiliates, and their respective subsidiaries and related persons, with or with respect to BlackRock Clients, give rise to potential conflicts of interest and could have potentially adverse effects on BlackRock Clients, described generally below.

When these persons provide such services to BlackRock Clients, and when BlackRock Clients invest in these investment products, relevant BlackRock entities or PNC Affiliates will be entitled, subject to applicable laws, to assess and retain fees and other amounts that they receive in connection with such products and services, without being required to account to any BlackRock Client. Additionally, subject to applicable laws, advisory fees, or other compensation payable by BlackRock Clients not be reduced or offset by reason of receipt by BlackRock or a PNC Affiliate of any such fees or other amounts. In some instances, members of the BlackRock Group or a PNC Affiliate, when acting in such commercial capacities, take commercial steps in their own interests, which can be adverse to those of the BlackRock Clients. Except as otherwise described herein, a BlackRock Investment Adviser may not take actions to negotiate terms between a BlackRock Client and BlackRock affiliates who provide these services, nor will the BlackRock Investment Adviser generally be responsible with respect to any losses or harms suffered by the BlackRock Client in connection with the BlackRock Client's use of services or products of such persons. Additionally, as with relationships with unaffiliated counterparties as described above, BlackRock Clients will be required to establish these business or commercial relationships with BlackRock affiliates, if at all, based on the BlackRock Client's own credit standing; such persons will not consider or rely on, and neither BlackRock nor any BlackRock Investment Adviser will be required to allow the credit standing of BlackRock or any BlackRock Investment Adviser to be used in connection therewith.

***Services Provided to a BlackRock Client by other BlackRock Investment Advisers or through Investments in a BlackRock Investment Product***

As discussed under "Services of Affiliates" in Item 4 ("Advisory Business") of this Brochure, BlackRock Investment Advisers use the personnel or services of other BlackRock entities in a variety of ways to make available BlackRock's global capabilities to BlackRock Clients. While BlackRock believes this practice is generally in the best interests of its clients, it can give rise to certain conflicts of interest, with respect to: (i) allocation of investment opportunities; (ii) execution of portfolio transactions; (iii) client servicing; and (iv) fees. Additionally, BlackRock Clients utilizing the services of BlackRock affiliates can be disadvantaged as a result of, among other things: (i) differences in regulatory requirements of various jurisdictions or organizations to which such BlackRock affiliates are subject; (ii) time differences; (iii) the terms of BlackRock's and such affiliates' internal policies and procedures, the client's investment advisory and other agreements; or (iv) the terms of the governing documents for a Private Fund, US Registered Fund or other investment product. BlackRock and its affiliates will seek to mitigate conflicts that arise by determining not to utilize the personnel or services of a particular affiliate in circumstances where it believes the potential conflict or adverse impact of ameliorative steps outweighs the potential benefits of the relationship.

***BlackRock's Registered Investment Companies, Private Funds and Other Investment Products***

BlackRock Investment Advisers, when appropriate and in accordance with applicable laws, investment objectives and guidelines, will purchase on behalf of BlackRock Clients, or will recommend to BlackRock Clients that they purchase, shares of US Registered Funds or other pooled investment vehicles (including Private Funds) for which BlackRock Investment Advisers serve as investment advisers or sub-advisers (collectively, "Affiliated Funds"). Certain BlackRock Investment Advisers that are domiciled outside of the U.S. serve as investment manager to ETFs domiciled outside

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of the U.S. (the “Foreign iShares ETFs”). Certain Foreign iShares ETFs may, from time to time, invest in the securities of the US iShares ETFs pursuant to a no-action letter issued by the SEC staff. In connection with any proxies solicited by the US iShares ETFs, the Foreign iShares ETFs will either abstain from voting or withhold voting, or if a quorum is reasonably expected to be achieved without any action, refrain from voting. BlackRock Investment Advisers also invest BlackRock Client assets in other portfolios managed by BlackRock Investment Advisers (collectively, “Affiliated Accounts”). In the case of Funds of Funds or separate accounts managed in a similar style, this may take the form of an investment in other BlackRock Private Funds, or separate accounts managed by BlackRock affiliates.

From time to time, as authorized in a Private Investors client's investment management agreement with BIM, and when either contemplated by a Private Investors client's investment strategy or upon direction from a client, BIM will invest Private Investors accounts in mutual funds, ETFs and/or other pooled investment vehicles (collectively, “Funds”) including but not limited to Affiliated Funds. Except under limited circumstances described below, when BIM invests Private Investors accounts in Funds, BIM typically invests solely in Affiliated Funds. Generally, BIM would only invest Private Investors accounts in Funds that are not Affiliated Funds upon direction from the client or in limited circumstances (e.g., if a Private Investors client directs BIM to conduct year-end “tax loss selling” on its behalf, and some of such sales include shares of an Affiliated Fund, BIM might reinvest the proceeds of such sale in a similar, non-Affiliated Fund for a short period of time in order to avoid the triggering of “wash sale” rules).

From time to time, to the extent permitted by a client's investment management agreement, and when either contemplated by client's investment strategy or upon direction from a client, BIM will invest Private Investors accounts and accounts of clients participating in SMA programs other than Private Investors (i.e., SMA programs not sponsored by BlackRock, referred to herein as “Non-PI SMA Programs”) in Management Fee-Waived Mutual Funds, which are specifically intended for SMA programs and do not charge management fees (or their fees are waived or reimbursed by the Fund's investment manager), and/or are only eligible for investment by SMA program clients of BlackRock. Such Management Fee-Waived Fund shares will be redeemed upon the termination of BlackRock's management. With respect to Model-Based SMA Programs, BIM often includes Affiliated Funds in model portfolios provided to OPMs.

With respect to investments in Funds for clients participating in Non-PI SMA Programs, unless otherwise directed by the Sponsor or client, BIM typically only utilizes Funds that are Affiliated Funds, including but not limited to Management Fee-Waived Mutual Funds. When BIM invests client accounts participating in Non-PI SMA Programs in Affiliated Funds that are not Management Fee-Waived Mutual Funds, the management fee payable to BIM in connection with the Non-PI SMA Program will either be (i) reduced by the account's pro rata share of any management fees paid by the Affiliated Fund to BlackRock as a result of such investment or (ii) not assessed on the client assets invested in Affiliated Funds.

The BlackRock Investment Advisers face potential conflicts when recommending the purchase of, or allocating the assets of, a BlackRock Client or Private Fund to one or more Affiliated Funds or Affiliated Accounts with respect to which BlackRock receives fees and/or other compensation. In hindsight, circumstances could be construed that such recommendation or allocation conferred a benefit upon the Affiliated Fund, Affiliated Account, or BlackRock Investment Adviser, to the detriment of the BlackRock Client or Private Fund, or vice versa.

As a shareholder in a pooled investment vehicle, a BlackRock Client will pay a proportionate share of the vehicle's fees and expenses. Investment by a BlackRock Client in an Affiliated Fund means that, subject to applicable laws, BlackRock will receive directly or indirectly advisory fees and/or other compensation from the Affiliated Fund that are in addition to the fees it will receive from the BlackRock Client for managing the separate account or Private Fund. Similarly, BlackRock Clients who invest in an Affiliated Fund through a Private Fund or separate account managed by another BlackRock Investment Adviser are subject to advisory fees charged in connection therewith.

Some Affiliated Funds could be considered “start-up” or early stage funds with low assets under management. In addition, BlackRock might have its own seed capital invested in certain Affiliated Funds and/or could have discretionary control of a significant amount of BlackRock Client assets invested in such Affiliated Funds. Withdrawing seed capital or BlackRock Client assets from such Affiliated Funds could disadvantage the other BlackRock Clients and other investors invested in the Affiliated Fund.

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BlackRock Clients who fund their separate accounts with shares of Affiliated Funds may incur deferred sales charges upon the sale of such shares by BlackRock, which could result in compensation to BlackRock or an affiliate that is in addition to the fees BlackRock will receive for managing the separate account. BlackRock Clients should notify BlackRock if they do not want their separate account assets or Private Fund investments to be invested in Affiliated Funds. Certain BlackRock Clients can invest directly in certain Affiliated Funds or other US Registered Funds outside of their separate accounts without paying additional separate account management fees to BlackRock. Consistent with applicable law, BlackRock may waive fees and/or reimburse fees or expenses for some BlackRock Clients while not waiving fees or reimbursing fees or expenses for other BlackRock Clients.

The separate account management fees paid by certain retirement accounts (including those subject to ERISA) that invest in US Registered Funds from which BlackRock or an affiliate receives compensation (including management fees or fees paid pursuant to Rule 12b-1 under the Investment Company Act) will be reduced by the account's pro rata share of such compensation, to the extent required by applicable law. In addition, in certain circumstances, (e.g., at BlackRock's discretion, or if required by applicable contractual arrangements), BlackRock, in order to avoid duplication of advisory fees, will waive all or a portion of its separate account investment management fee with respect to any assets of a BlackRock Client invested in shares of any such US Registered Funds or other pooled investment vehicles, or separately managed accounts of another BlackRock Investment Adviser. To the extent permissible under applicable law and the terms of any relevant contractual arrangement, BlackRock will institute, waive, or alter the terms of such a waiver from time to time in its sole and absolute discretion. Similar conflicts will apply where the fund or account is managed by a PNC Affiliate.

To the extent permitted by applicable laws, BlackRock and its affiliates make payments to financial intermediaries relating to the placement of interests in Private Funds. These payments are in addition to or in lieu of any placement fees payable by investors in those Private Funds. These payments, potentially significant to the financial intermediary and/or its representatives, can create an incentive for the financial intermediary to recommend the Private Fund over other products.

Certain Private Funds, their Advisers and other BlackRock Investment Advisers may conform to regulations under the Bank Holding Company Act of 1956, as amended, resulting in limits or restrictions on investments in certain companies, and underlying funds. These potential restrictions are generally discussed in each applicable Private Fund's OM.

In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank") was signed into law in the U.S. The Dodd-Frank is expansive in scope and requires the adoption of extensive regulations and numerous regulatory decisions, many of which have been adopted. BlackRock has commenced a conformance program to address certain regulations adopted under the Dodd-Frank, as well as financial reforms that have been introduced as part of the SEC's investment company modernization initiatives. The cost of these initial conformance activities have been absorbed by BlackRock; however, as the full extent of the Dodd-Frank and other rules will only become evident over time, it is not yet possible to predict the ultimate effects that the Dodd-Frank, or subsequent implementing regulations and decisions, will have upon BlackRock's business, financial condition, and operating activities.

In addition, the SEC, the Internal Revenue Service and the CFTC each continue to review practices and regulations relating to the use of futures, swaps and other derivatives. Such reviews could result in regulations that restrict or limit the use of such products by funds or accounts. If adopted, these limitations could require BlackRock to change certain business practices or implement new reporting or compliance processes, which could result in additional costs and/or restrictions.

Other jurisdictions outside the U.S. in which BlackRock operates have implemented or are in the process of considering implementing more pervasive regulation of many elements of the financial services industry, which could have an impact on BlackRock and the broader markets. Such jurisdictions include the EU, which on July 22, 2013 put into effect the EU's Alternative Investment Fund Managers Directive ("AIFMD"). The AIFMD regulates managers of, and service providers to, a broad range of alternative investment funds ("AIFs") domiciled within and (depending on the precise circumstances) outside the EU. The AIFMD also regulates the marketing of all AIFs inside the European Economic Area. Compliance with the AIFMD's requirements regulates marketing of funds subject to the



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AIFMD and places additional compliance and disclosure obligations regarding remuneration, capital requirements, leverage, valuation, stakes in EU companies, depositaries, and liquidity management.

### ***Rule 12b-1 Plans of BlackRock US Registered Funds and Additional Payments***

Some of the BlackRock US Funds that are open-end funds (outside the US iShares ETF Complex) have adopted plans under Rule 12b-1 of the Investment Company Act (the “Plans”) that allow such BlackRock US Funds to pay distribution and shareholder servicing fees. The distribution fees are permitted to be used to pay an affiliate of BlackRock, or others for distribution services and sales support and shareholder liaison services provided in connection with the sale of certain classes of shares of such BlackRock US Funds. Shareholder servicing fees payable pursuant to the Plans are fees payable for shareholder liaison and other services and not costs which primarily are intended to result in the sale of BlackRock US Funds’ shares. The fees also can be used to pay an affiliate of BlackRock for related expenses such as payments made by an affiliate of BlackRock to compensate or reimburse brokers, dealers, financial institutions and industry professionals, including other PNC Affiliates, for sales support services and related expenses.

The Plans permit BlackRock and their affiliates to make payments relating to distribution and sales support activities out of their past profits or other sources available to them (and not as an additional charge to the funds).

BlackRock and its affiliates are permitted to pay affiliated and unaffiliated entities compensation for the sale and distribution of shares of the funds or for other services to the funds and shareholders. These payments (“Additional Payments”) are in addition to the Plan payments described in such BlackRock US Fund’s prospectuses and/or statement of additional information. The Additional Payments include amounts that are sometimes referred to as “revenue sharing” payments. BlackRock can also make “revenue sharing” payments with respect to products other than the BlackRock US Funds. In some circumstances, these revenue sharing payments create a potential incentive for the entity receiving such payments, its employees or associated persons, to recommend or sell shares of a BlackRock US Fund or other fund or product. BlackRock or an affiliate of BlackRock also make payments for administrative and sub-transfer agency, operational and recordkeeping, networking and shareholder servicing with respect to the BlackRock US Funds (as disclosed in the fund prospectuses and statement of additional information).

### ***Use of PNC Affiliates to Provide Services or Execute Transactions***

Subsidiaries of PNC are registered broker-dealers, as described in Item 10 (“Other Financial Industry Activities and Affiliations”) above (collectively, “PNC Broker-Dealers”). PNC Broker-Dealers effect securities transactions or other investment transactions as principal and agent for compensation for BlackRock Clients advised by BlackRock Investment Advisers in accordance with applicable law. These activities give rise to potential conflicts of interest. For ERISA specific information see “Considerations for ERISA Clients” below.

### ***Transactions in Securities, Futures and Similar Instruments***

BlackRock Investment Advisers, on behalf of BlackRock Clients, from time to time enter into relationships with, or engage in transactions with or through, various PNC Affiliates that act as agent or principal for compensation, including securities, futures and/or options on futures contracts, foreign exchange transactions, swaps, and other derivatives transactions, either on a securities or commodities exchange or otherwise, subject to limitations and prohibitions applicable to certain transactions for accounts subject to ERISA and for accounts of US Registered Funds. For information specific to ERISA see “Considerations for ERISA Clients” below.

A PNC Broker-Dealer may effect, as broker or agent, futures and/or options on futures contracts on a commodity exchange for compensation for BlackRock Clients that are not subject to ERISA, including US Registered Funds in accordance with procedures adopted by such US Registered Funds’ boards of directors/trustees. Such procedures include a review of all trades with a PNC Broker-Dealer by the boards of directors/trustees to determine that the rates paid are usual and customary. When executing transactions on the floor of commodity exchanges, a buy or sell order placed by a BlackRock Investment Adviser with a PNC Broker-Dealer on behalf of a BlackRock Client may be matched without the BlackRock Investment Adviser’s knowledge with an order from a PNC Broker-Dealer or its customer.

In other cases, BlackRock Investment Advisers place orders on behalf of BlackRock Clients with unaffiliated brokers or dealers to buy or sell securities for which PNC Affiliates act as a market maker. A buy or sell order placed by a

BlackRock Investment Adviser on behalf of a BlackRock Client for execution on the floor of a securities or commodities exchange (or through an ECN, ATS, “dark pool” or other similar system potentially will be matched with an order from another BlackRock Investment Adviser, a member of the BlackRock Group or a PNC Affiliate, or a client of a PNC Affiliate, without the BlackRock Investment Adviser’s knowledge. Similarly, from time to time in the ordinary course of business, an order to buy or sell an investment, contract or position placed by a BlackRock Investment Adviser with a PNC Broker-Dealer on behalf of a BlackRock Client potentially will be matched with an order from that PNC Broker-Dealer or a customer of such PNC Broker-Dealer, without the BlackRock Investment Adviser’s knowledge. However, BlackRock and each PNC Broker-Dealer are totally separate entities, and BlackRock has neither advance knowledge of, nor control over, the counterparty. Nonetheless, BlackRock seeks, to the extent practicable, to assure that such transactions are conducted in a manner consistent with BlackRock’s obligations to its clients and in compliance with applicable legal, regulatory, and contractual requirements. In connection with transactions in which a PNC Broker-Dealer will act as principal, the BlackRock Investment Adviser will disclose to that BlackRock Client that the trade will be conducted on a principal basis and obtain the approvals required by Section 206(3) of the Advisers Act. For US Registered Funds, PNC Broker-Dealers can effect securities transactions as agent for compensation for such US Registered Funds in accordance with procedures adopted by the US Registered Funds’ boards of directors/trustees pursuant to Section 17(e) of, and Rule 17e-1 under, the Investment Company Act and related regulatory authority

***Purchases of Unregistered Securities through a PNC Broker-Dealer***

From time to time, BlackRock Investment Advisers may purchase on behalf of BlackRock Clients unregistered securities for which a PNC Broker-Dealer acts as placement agent. This results in additional fees paid to the PNC Broker-Dealer and/or assist the PNC Broker-Dealer in meeting its contractual obligations, although the BlackRock Investment Adviser will not take these factors into account when making the purchase.

***Purchases of Securities for which a PNC Broker-Dealer is an Underwriter***

From time to time, BlackRock Investment Advisers may purchase, on behalf of BlackRock Clients, securities in offerings with respect to which a PNC Broker-Dealer serves as a lead underwriter, manager or member of the underwriting syndicate. In such cases, the purchase will generally be made from a party that is not the PNC Broker-Dealer, but the PNC Broker-Dealer nevertheless benefits from such transactions. All such transactions will be effected in accordance with applicable law, including the Advisers Act, the Investment Company Act and ERISA. When a PNC Broker-Dealer is engaged in an underwriting or other distribution of securities or bank loans of a company, BlackRock Investment Advisers are prohibited, for certain types of BlackRock Clients, from purchasing or recommending the purchase of certain securities or bank loans of that company for such BlackRock Clients. Notwithstanding the circumstances described above, a client on its own initiative may direct BlackRock to place orders for specific securities transactions in a client account. Purchases for BlackRock Clients that are subject to ERISA are made in accordance with the provisions of the Exemption as described under “Considerations for ERISA Clients” below.

For US Registered Funds, when an affiliate, as defined under the Advisers Act or the Investment Company Act, is a member of the underwriting syndicate, the purchase of securities in the underwriting on behalf of the US Registered Fund will be in accordance with procedures adopted by the US Registered Funds’ boards of directors/trustees pursuant to Rule 10f-3 under the Investment Company Act.

***Borrowing or Lending Funds or Securities and Cash Management***

Subject to applicable laws and regulations, from time to time, BlackRock Investment Advisers cause BlackRock Clients to borrow money from PNC Affiliates, potentially requiring collateral, consisting of assets in the BlackRock Client’s account, to be pledged in connection with such borrowing. Such PNC Affiliates will earn interest, payable out of BlackRock Client funds, on such borrowings, as well as fees for servicing loans made to BlackRock Clients.

Each US Registered Fund, including the ETFs advised by a BlackRock Investment Adviser, has received an exemptive order from the SEC permitting it to lend portfolio securities to affiliated borrowers. Pursuant to that order, each US Registered Fund is permitted to retain a Lending Agent as a securities lending agent for a fee, which is generally based on a share of the overall returns from securities lending. In connection with securities lending activities, the Lending Agent may, on behalf of a US Registered Fund, invest cash collateral received by the US Registered Fund for such loans, among other things, in a private investment company or in US Registered Funds that are money market funds or in other cash management vehicles sponsored, advised or managed by a BlackRock Investment Adviser or the Lending Agent. If a US Registered Fund acquires shares in such private fund, cash



management vehicle or affiliated money market fund, shareholders will bear both their proportionate share of the US Registered Fund's expenses and, indirectly, the expense of such other entities. Such shares will not be subject to a sales load, redemption fee, distribution fee or service fee, or in the case of the shares of an affiliated money market fund, the payment of any such sales load, redemption fee, distribution fee or service fee will be offset by the manager's waiver of a portion of its advisory fee.

### ***Pricing and Valuation of Securities and Other Investments***

In many cases, BlackRock's fees are based on the value and performance of the assets held in the client account. BlackRock generally does not price securities or other assets for purposes of determining fees. However, to the extent permitted by applicable laws, including ERISA, from time to time, BlackRock or an affiliate will be charged with the responsibility of, or have a role in, determining in good faith asset values with respect to BlackRock products or accounts and BlackRock, or such an affiliate, will be required to price a portfolio holding when a market price is not readily available or when BlackRock has reason to believe in good faith that the market price is unreliable. To the extent BlackRock's fees are based on the value or performance of client accounts, BlackRock would benefit by receiving a fee based on the impact, if any, of the increased value of assets in an account.

When pricing a security, BlackRock attempts, in good faith and in accordance with applicable laws, to determine the fair value of the security or other assets in question. BlackRock generally relies on prices provided by a custodian, a broker-dealer, index provider or another third-party pricing service for valuation purposes. When market quotations are not readily available or are believed in good faith by BlackRock to be unreliable, the security or other asset or liability is valued by BlackRock in accordance with BlackRock's valuation procedures. Valuation procedures for certain separate accounts and/or Private Funds may be described in the relevant IMA, OM and/or other governing documents. With respect to Funds of Funds and other BlackRock products or accounts which invest in privately placed pooled investment vehicles managed by third-parties and/or investments sponsored by such third-party managers, BlackRock generally relies on pricing information provided by the Private Fund or its manager or other service provider. While BlackRock expects that such persons will provide appropriate valuations, such persons face conflicts similar to those described above and certain investments may be complex or difficult to value. BlackRock may also perform its own valuation analysis, but generally will not independently assess the accuracy of such valuations. For certain clients, at the clients' request, BlackRock has agreed to provide "reasonable assistance" involving the valuation of securities. This typically does not include proactively communicating BlackRock's valuation judgments to such clients.

From time to time, BlackRock, an affiliate, or a PNC Affiliate will be engaged to provide valuation assistance to certain clients with respect to certain securities or other investments. Valuation recommendations made by BlackRock for a client account can differ from the valuations for the same securities or investments assigned by a client's custodian or pricing vendors, especially if such valuations are based on broker-dealer quotes or other data sources unavailable to the client's custodian or pricing vendors. In addition, BlackRock, through BRS and FMA in particular, provides a variety of services to clients in connection with the evaluation of certain distressed securities or other assets, including advice relating to the management, retention, disposition and valuation of such assets.

In certain instances described below, BlackRock, in good faith based on available information, will determine an asset's fair value using a variety of methodologies. Furthermore, in circumstances where material non-public information is available to one group at BlackRock but, consistent with BlackRock's compliance policies and procedures, is not available to all groups at BlackRock, asset valuations used for pricing of underlying investments can be inconsistent. Due to specific time and operational constraints related to the daily calculation of net asset value certain BlackRock-sponsored funds may value the same assets that are held in other non-registered funds or other accounts using different pricing sources than are used by other funds and accounts. BlackRock's Global Valuation Methodologies Committee (the "GVMC") reports to and derives its authority from the Valuation Oversight Committee (the "VOC"), which consists of senior members of RQA, BRS, Legal and Compliance and other groups at BlackRock. The GVMC is responsible for overseeing valuation and pricing issues impacting BlackRock and its clients, including the design and implementation of pricing controls and the development of valuation policies and procedures.

For certain assets that BlackRock manages on behalf of BlackRock Clients, pricing and valuation will be unavailable or unreliable, from time to time, due to market dislocations, loss of pricing coverage, or market-making activities by broker-dealers, mergers and liquidations of broker-dealers or pricing vendors that previously supplied pricing data,

the distressed nature of certain forced asset sales due to deleveraging transactions, extreme market volatility in certain assets classes, uncertainty surrounding potential or actual government intervention in the markets for certain assets, and other factors that have diminished the timeliness, accuracy or reliability of asset price information. In such circumstances, a client's investments generally will be valued at fair value ("Fair Value Assets"). Fair Value Assets are valued by BlackRock in accordance with BlackRock's valuation procedures or, when held in a BlackRock-sponsored registered investment company, in accordance with valuation and liquidity procedures approved by the investment company's board of directors/trustees. BlackRock may conclude that a market quotation is not readily available or is unreliable: (i) if a security or other asset does not have a price source (e.g., due to technology issues, lack of liquidity, etc.); (ii) if BlackRock believes a market quotation from a broker-dealer or other source is unreliable (e.g., where it varies significantly from a recent trade); (iii) where the security or other asset is thinly traded; (iv) where recent asset sales represent distressed sale prices not reflective of the price that a client might reasonably expect to receive from the current sale of that asset in an arm's-length transaction; or (v) where there is a significant material event subsequent to the most recent market quotation. BlackRock's good faith judgment as to whether an event would constitute a "significant event" likely to cause a material change in an asset's market price may, in hindsight, prove to be incorrect, and the fair value determination made by BlackRock may be incorrect as to the direction and magnitude of any price adjustment when compared to the next available market price. In circumstances where BlackRock typically relies on a valuation provided by a third-party, if the third-party fails to provide a valuation, or if BlackRock believes such valuation is not representative of fair value, BlackRock will determine fair value in good faith in accordance with its valuation policies and procedures.

On a date when the New York Stock Exchange ("NYSE") is open and the primary exchange on which a foreign asset is traded is closed, such asset will generally be valued using the prior day's price, provided that BlackRock is not aware of any significant event or other information that would cause such price to no longer reflect the fair value of the asset. In such case the asset would be treated as a Fair Value Asset.

BlackRock will submit its recommendations regarding the valuation and/or valuation methodologies for Fair Value Assets to BlackRock's GVMC or a subcommittee thereof. The GVMC or its subcommittee will accept, modify, or reject the recommendations. BlackRock's Pricing Group periodically endeavors to confirm the prices it receives from all third-party pricing services, index providers and broker-dealers, and, with the assistance of BlackRock's portfolio managers, to regularly evaluate the values assigned to the securities and other assets held by BlackRock Clients. The pricing of all Fair Value Assets is subsequently reported to the GVMC or a subcommittee thereof with appropriate oversight from the VOC and, in the case of assets held in BlackRock US Funds, reviewed and/or ratified by a BlackRock US Fund's board or a committee thereof.

When determining the price for a Fair Value Asset, BlackRock seeks to determine the price that a client might reasonably expect to: (i) receive upon the current sale of the security or asset; or (ii) pay to transfer the liability associated with the security or asset in an orderly arm's-length transaction between market participants on the date on which the security or asset is being valued. The price generally will not be determined based on what a client might reasonably expect to receive for selling an asset at a later time or if it holds the asset to maturity. Fair value determinations will be made in good faith and will be based upon all available factors that BlackRock deems relevant at the time of the determination, and may be based on analytical values determined by BlackRock using proprietary or third-party valuation models such as the Black-Scholes Option Pricing model. Nevertheless, the models and/or underlying valuation assumptions utilized by BlackRock may potentially not correctly capture the fair value of an asset, which could impact the cost paid or proceeds realized by a client upon the purchase or disposition of the asset. BlackRock's fair value determinations may differ from those made by other advisers for the same security.

Fair value represents a good faith approximation of the value of a security. In retrospect, the fair value of one or more securities can differ from the price at which those assets could have been sold during the period in which the particular fair values were used in determining a client's asset value for performance or fee calculation purposes or, in the case of registered investment companies or other pooled investment vehicles, net asset value per share or unit on purchases and redemptions. For investment companies and other pooled investment vehicles, the sale or redemption of its shares or units at net asset value, at a time when a holding or holdings are valued at fair value, can have the effect of diluting or increasing the economic interest of existing investors and result in a purchasing or redeeming investor receiving too few shares/units or too little cash.

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BlackRock will communicate its valuation information or determinations to a client's custodian, pricing vendors and/or fund accountants as reasonably requested. There may be instances where the client's custodian, pricing vendors or fund accountants assign a different valuation to a security or other investment than the valuation for such security or investment determined or recommended by BlackRock.

### ***Banking, Custodial and Related Services***

With respect to institutional accounts, from time to time when asked by a BlackRock Client to recommend a custodian for its account, a BlackRock Investment Adviser could recommend that a BlackRock Client deposit assets with financial institutions affiliated with PNC, which receive fees or earn revenues on such deposits. Additionally, PNC and certain of its affiliates maintain custody of certain of BlackRock Clients' funds and securities, including certain Private Funds.

BlackRock or its affiliates own or have an ownership interest in certain trading, portfolio management, operations and/or information systems (the "Systems") used by one or more service providers providing custodial services to BlackRock Clients or funds managed by a BlackRock Investment Adviser (each a "Service Provider"). The Services Providers remunerate BlackRock or its affiliates for the use of the Systems. Such payments to BlackRock or its affiliates for the use of the Systems may enhance the profitability of BlackRock and its affiliates. The receipt of fees by BlackRock or its affiliates from a Service Provider in connection with the use of the Systems may create an incentive for BlackRock to recommend that a BlackRock Client or fund managed by a BlackRock Investment Adviser enter into or renew a custodial arrangement with a Service Provider.

### ***Considerations for ERISA Clients***

When executing transactions with PNC Broker-Dealers or engaging in other activities for BlackRock Clients subject to ERISA, BlackRock Investment Advisers will comply with ERISA and the applicable regulations adopted by the DOL.

Although the stockholder agreement between BlackRock, Inc. and PNC Financial Services Inc. (for convenience, PNC Financial Services, Inc. and its affiliates are collectively referred to as "Minority Passive Shareholder" or "MPS") restricts the ability of an MPS to control the activities of BlackRock, Inc. and BlackRock Investment Advisers, its shareholdings could be deemed to affect the best judgment of the BlackRock Investment Adviser as a fiduciary. This could raise conflict of interest concerns under Section 406(b) of ERISA if a fund or account (each, an "Account") within this section of the Brochure) advised by the BlackRock Investment Adviser were to enter into a transaction with an MPS; provided however that subsequent changes in the relevant facts and circumstances could change this determination. In addition, an MPS may be a "party-in-interest" to ERISA plans that have a BlackRock-advised Account as a result of providing services to such plans. Entering into transactions on behalf of an Account with an MPS (or the provision of services by an MPS to an Account) can constitute, or result in, prohibited transactions under Section 406(a) of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended (the "IRC"), with respect to which the exemptions commonly utilized by the BlackRock Investment Adviser with respect to non-MPS entities may not be available. Because of these potential limits, the DOL has granted an exemption to BlackRock, (PTE 2012-09 or the "Exemption"), which is an individual prohibited transaction exemption from the application of certain provisions of ERISA, the Federal Employees' Retirement System Act of 1986, as amended and Section 4975 of the IRC with respect to certain transactions which are summarized in Sections III and IV of the Exemption (the "Covered Transactions"). The Exemption was published in the Federal Register on April 2, 2012 (77 FR19836).

Under the Exemption, the BlackRock Investment Adviser is permitted to enter into certain transactions with or involving an MPS (the "Exempted Transactions") on behalf of an Account. The Exempted Transactions include, but are not limited to, repurchase agreements where an MPS acts as seller; the purchase or sale of fixed income obligations with an MPS acting as a principal or agent; the purchase, holding, and sale of securities issued by an MPS; the purchase, holding, and sale of exchange traded funds registered under the Investment Company Act and advised by a BlackRock Investment Adviser (such as the US iShares ETFs); the purchase, holding, and sale of asset-backed securities when an MPS is a sponsor, a servicer, an originator, a swap counterparty, a liquidity provider, a trustee, or an insurer, responding to tender offers and exchange offers solicited by an MPS; the purchase, holding, and sale of commercial paper issued by an Asset-Backed Commercial Paper Conduit where an MPS has one or more continuing roles; the purchase, holding, and sale of BlackRock equity securities; the purchase, holding, and sale of loans where an MPS is an arranger and/or has an ongoing function in relation to the loan; and the

purchase in a primary offering of securities where an MPS is (i) a manager or member of the underwriting syndicate and/or acts as trustee, and/or (ii) in the case of commercial mortgage-backed securities, a commercial mortgage originator or servicer. The primary offering purchases tend to also include (i) securities where an MPS has either an ongoing function and/or (ii) securities where the proceeds are used to repay a debt to an MPS. The Exemption does not permit an Account to enter into certain transactions with, or involving, an MPS, including without limitation: (i) over-the-counter derivatives; or (ii) executing or clearing futures. Accordingly, as a consequence of the fact that (i) certain transactions with or involving an MPS are not permitted, and (ii) other transactions with an MPS must be entered into in accordance with the conditions of the Exemption, ERISA could materially limit the activities of an Account.

BlackRock has appointed a third-party to act as an independent monitor (the “Independent Monitor”), to provide independent review and oversight as a condition of the Exemption. In addition, written policies and procedures reasonably designed to comply with the terms of the Exemption have been adopted and implemented. Additionally, BlackRock has appointed an Exemption Compliance Officer, with the approval of the Independent Monitor, to comply with the Exemption. The Exemption Compliance Officer or his/her designee is responsible for monitoring the Exempted Transactions and reviewing compliance with the conditions of the Exemption.

## **POTENTIAL CONFLICTS RELATING TO PRODUCTS AND SERVICES OF PNC AFFILIATES**

### ***Certain Investment Products or Services of PNC Affiliates Compete with BlackRock Clients***

From time to time, PNC Affiliates will sponsor and manage investment funds or other client accounts that compete directly or indirectly with the investment program of BlackRock Clients or make investments with funds sponsored or managed by third-party advisers that would reduce capacity otherwise available to BlackRock Clients in such entities. Additionally, from time to time, various PNC Affiliates will create, sell, issue, or act as placement agent or distributor of, derivative instruments with respect to BlackRock Clients or with respect to underlying securities, currencies or instruments held by BlackRock Clients, or which are otherwise based on or related to the performance of BlackRock Clients. The structure or other characteristics of such derivative instruments could have an adverse effect on BlackRock Clients. For example, the derivative instruments developed by a PNC Affiliate could represent leveraged investments in BlackRock Clients, and the leveraged characteristics of such investments could make it more likely, due to events of default or otherwise, that there would be significant changes in the values of securities issued by BlackRock Clients. This could have an adverse effect on the assets owned by, and any resultant investment management and positions, flexibility, and diversification strategies BlackRock Investment Advisers employ for such BlackRock Clients, and consequently on the amount of fees, expenses and other costs incurred directly or indirectly for the account of BlackRock Clients. Similarly, from time to time, members of the BlackRock Group will invest, for BlackRock Clients or themselves, and PNC Affiliates, subject to applicable laws, may invest, on a proprietary basis or for their clients, in securities issued by BlackRock Clients, and may hedge derivative positions by buying or selling securities issued by BlackRock Clients. These investments can be significant and made without notice to BlackRock or BlackRock Clients.

### ***Investments in Service Clients of the BlackRock Group or the PNC Affiliates***

The BlackRock Group and PNC Affiliates provide a variety of services and advice (including investment banking services, fairness opinions, and extensions of credit provided by PNC) to, various clients (“Service Clients”), including issuers of securities that BlackRock Investment Advisers may purchase or sell for BlackRock investment advisory clients, and may generally receive fees for these services (including fees that are contingent on the successful placement of securities and successful closing of a transaction). As a result of the relationships between BlackRock Group and the PNC Affiliates, BlackRock may have an incentive to invest in securities issued by Service Clients. BlackRock believes, however, that the nature and range of Service Clients is such that it would be inadvisable to exclude the securities of Service Clients. Accordingly, absent a specific investment restriction or direction or regulatory restriction, it is possible that a BlackRock Client’s account will include the securities issued by Service Clients. In addition, it is possible that the BlackRock Group will receive certain transaction fees from Service Clients the securities of which BlackRock wishes to purchase or sell on behalf of BlackRock Clients in connection with structuring, negotiating, or entering into such investment transactions, as well as ongoing advisory or monitoring fees. In some instances, fees and expenses will be earned by the BlackRock Group or its personnel if such personnel serve as directors or officers of Service Clients.



**POTENTIAL CONFLICTS RELATING TO BLACKROCK CLIENTS' USE OF INVESTMENT CONSULTANTS AND BLACKROCK'S RELATIONSHIP WITH PENSION CONSULTANTS**

Many BlackRock Clients work with pension or other institutional investment consultants (collectively, "Investment Consultants"), who provide a wide array of services to pension plans and other institutions, including assisting in the selection and monitoring of investment advisers such as BlackRock Investment Advisers. From time to time, BlackRock Clients' Investment Consultants who recommend BlackRock Investment Advisers to, and provide oversight of BlackRock Investment Advisers for, BlackRock Clients also provide services to or purchase services from members of the BlackRock Group and PNC Affiliates. For example, BlackRock purchases certain index and performance-related databases and human resources-related information from Investment Consultants and their affiliates. BlackRock Investment Advisers also utilize brokerage execution services of Investment Consultants or their affiliates, and members of the BlackRock Group, as well as personnel of PNC Affiliates attend conferences sponsored by Investment Consultants. Conversely, from time to time, the BlackRock Group and PNC Affiliates will be hired by Investment Consultants and their affiliates to provide investment management and/or risk management services, creating possible conflicts of interest.

**BLACKROCK IN-SOURCES OR OUTSOURCES CERTAIN SERVICES TO THIRD-PARTIES**

Subject to applicable law and contractual duties to clients, BlackRock, including BlackRock Investment Advisers, from time to time, and without notice to BlackRock Clients, will in-source or outsource to third-parties, including parties which are affiliated with BlackRock, certain processes or functions in connection with a variety of services that they provide to BlackRock Clients in their administrative or other capacities. Such in-sourcing or outsourcing will give rise to potential conflicts of interest, including where BlackRock or other BlackRock Clients receive favorable pricing or other benefits that arise from or are connected to another BlackRock Client's vendor relationships.

**POTENTIAL RESTRICTIONS ON INVESTMENT ADVISER ACTIVITY**

From time to time, BlackRock will be restricted from or limited in purchasing, selling or voting securities, derivative instruments or other assets, including Affiliated Accounts, on behalf of BlackRock Clients because of corporate or regulatory and legal requirements, as well as contractual restrictions, applicable to BlackRock or the securities held by BlackRock on behalf of its clients. BlackRock will develop internal policies, to the extent necessary, designed to comply with, limit the applicability of, or otherwise relate to such requirements, as well as address potential conflicts of interest. These restrictions can impact or limit BlackRock's ability to purchase, vote or sell certain securities, derivative instruments or other assets on behalf of certain BlackRock Clients at the same time as other BlackRock Clients. A client not advised by BlackRock will not necessarily be subject to the same considerations.

In some cases, BlackRock Investment Advisers do not initiate or recommend certain types of transactions, or will otherwise restrict or limit their advice with respect to securities or instruments issued by or related to companies for which BlackRock is performing advisory or other services, or companies in which BlackRock has an interest. Such limitations or restrictions can arise solely from actions taken or initiated by BlackRock and have a negative effect on BlackRock Clients. For example, from time to time, when BlackRock is engaged to provide advisory or risk management services for a company, BlackRock Investment Advisers will be prohibited from or limited in purchasing or selling securities of that company for BlackRock Client accounts, particularly where such services result in BlackRock obtaining material non-public information about the company. Similar situations could arise if: (i) BlackRock personnel serve as directors or officers of companies the securities of which BlackRock wishes to purchase or sell; (ii) BlackRock has an ownership or other interest in a company; (iii) BlackRock is provided with material non-public information with respect to the issuer of securities; (iv) BlackRock Investment Advisers on behalf of BlackRock Clients or BlackRock, Inc. participate in a transaction (including a controlled acquisition of a U.S. public company) that results in the requirement to restrict all purchases and voting of equity securities of such target company; or (v) regulations, including portfolio affiliation rules or stock exchange rules, prohibit participation in offerings by an issuer when BlackRock's Clients' have prior holdings of such issuer's securities. However, where permitted by applicable law, and where consistent with BlackRock's policies and procedures (including the implementation of appropriate information barriers), BlackRock can purchase or sell securities or instruments that are issued by such companies or are the subject of an advisory or risk management assignment by BlackRock, or in cases in which BlackRock personnel serve as directors or officers of the issuer.

In certain circumstances where BlackRock invests in securities issued by companies that operate in certain regulated industries or in certain emerging or international markets, or are subject to corporate or regulatory ownership



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restrictions, there will be limits on the aggregate amount permitted to be invested or voted by BlackRock and/or PNC that can be exceeded only with the grant of a license, waiver, regulatory relief or corporate consent. As a result, BlackRock Investment Advisers on behalf of BlackRock Clients may limit purchases, sell existing investments, or otherwise restrict, forgo, or limit the exercise of rights (including transferring, outsourcing or limiting voting rights) when BlackRock Investment Advisers, in their sole discretion, deem it appropriate in light of potential regulatory or corporate restrictions on ownership or other consequences resulting from reaching investment thresholds. Similar limitations apply to derivative instruments or other assets or instruments, including futures, options, or swaps.

In those circumstances where ownership thresholds or limitations must be observed, BlackRock seeks to equitably allocate limited investment opportunities among BlackRock Clients, taking into consideration a security's benchmark weight and investment strategy. When BlackRock's ownership in certain securities nears an applicable threshold, BlackRock will limit purchases in such securities to the issuer's weighting in the applicable benchmark used by BlackRock to manage the BlackRock Client account or fund. If BlackRock's Clients' holdings of an issuer exceed an applicable threshold and BlackRock is unable to obtain relief to enable the continued holding of such investments, it will be necessary to sell down these positions to meet the applicable limitations, possibly during deteriorating market conditions. In these cases, benchmark overweight positions will be sold prior to benchmark positions being reduced to meet applicable limitations. For additional information regarding BlackRock's allocation policy, please refer to "Competing or Complementary Investments and Trade Aggregation" in Item 12 ("Brokerage Practices") of this Brochure.

In addition to the foregoing, other ownership thresholds may trigger or require reporting, applications, licenses, or other special obligations to governmental and regulatory authorities, and such reports, applications, or licenses may entail the disclosure of the identity of the BlackRock Client or BlackRock's intended strategy with respect to such securities, instruments, or assets. Where applicable, BlackRock can elect to forego or limit certain investments or opportunities, including limitations on voting or other investor rights, rather than incur the costs of an application, registration, or license.

Under certain circumstances, BlackRock will restrict a purchase or sale of a security, derivative instruments, or other assets on behalf of BlackRock Clients in anticipation of a future conflict that may arise if such purchase or sale would be made. Any such determination will take into consideration the interests of the relevant BlackRock Clients, the circumstances that would give rise to the future conflict and applicable laws. Such determination will be made on a case by case basis.

When evaluating non-index investments on behalf of its clients, especially in the case of private and real assets, BlackRock may consider the reputational risks of such investments to itself or its clients. As a result, BlackRock may, from time to time, forego making or disposing of non-index investments on behalf of its clients based on BlackRock's evaluation of these risks, even in circumstances where such investments are legally permissible and consistent with client guidelines. With respect to index investing, however, BlackRock manages to each applicable index without regard to these risks.

## Item 12 Brokerage Practices

As a general rule, each Adviser receives discretionary (or non-discretionary) investment authority from its clients at the outset of an advisory relationship. Subject to the terms of the applicable IMA, the Adviser's authority often includes the ability to select brokers and dealers through which to execute transactions on behalf of its clients, and to negotiate the commission rates, if any, at which transactions are effected. In making decisions as to which securities or instruments are to be bought or sold and the amounts thereof, each Adviser is guided by the mandate selected by the client and any client-imposed guidelines or restrictions. In some cases, pursuant to the advisory relationship, each Adviser has the authority to enter into an over-the counter derivative relationship and transaction related documentation, repurchase agreements, futures and cleared derivatives agreements, listed options agreements, prime brokerage and securities lending agreements, securities forward agreements and other brokerage and/or trading agreements in connection with the trading of certain securities or instruments.

### SELECTION OF BROKERS, DEALERS AND OTHER TRADING VENUES AND METHODS

The overriding consideration in allocating client orders for execution is the maximization of client profits (or minimization of losses) through a combination of controlling transaction costs (including market impact) and seeking the most effective uses of a broker's capabilities. When an Adviser has the authority to select brokers or dealers to execute transactions for its clients, it seeks to obtain the best execution reasonably available under the circumstances (which may or may not result in paying the lowest available brokerage commissions or spread). In so doing, the Adviser considers all factors it deems relevant. Such factors are typically either venue specific or transaction specific and may include, but not be limited to: (A) for venues: (i) execution capability including speed of execution, quality of communication links to BlackRock, clearance and trade settlement history and capability and ratio of complete versus incomplete trades; (ii) ability to handle large trades in securities having limited liquidity without undue market impact and ability to provide liquidity (as principal, agent or otherwise); (iii) access to market liquidity and quotation sources; (iv) financial condition of the counterparty, including reputation and creditworthiness; (v) responsiveness and reliability in executing trades, keeping records and accounting for and correcting administrative errors; (vi) ability to maximize price improvement opportunities, including the ability to provide ad hoc information or services; and (vii) ability to comply with all regulatory requirements; and (B) for transactions: (i) price and overall cost of the transaction, including any related credit support; (ii) the size, type and timing of the transaction; (iii) existing and expected activity in the market for the security, including any trading patterns of the security and the particular marketplace; (iv) nature and character of the security or instrument and the markets on which it is purchased or sold; (v) value of research provided, if permitted under applicable law or regulation; (vi) fund or portfolio objectives or client requirements (if permissible), as applicable; (vii) if applicable, client-directed brokerage arrangements; and (viii) applicable execution venue factors.

The Advisers do not consider a broker's or dealer's sales of BlackRock or clients' products, including shares of mutual funds or ETFs, when determining whether to select such broker or dealer to execute fund portfolio transactions. In addition, when deemed appropriate by the Adviser and subject to the applicable IMA and investment guidelines, an Adviser will enter into derivatives transactions (including but not limited to futures, swaps, options and currency forward contracts) on behalf of a Client. Counterparties to these derivatives transactions are selected based on a number of factors, including credit rating, execution prices, execution capability with respect to complex derivative structures and other criteria relevant to a particular transaction.

The Advisers endeavor to be aware of current charges assessed by relevant broker-dealers and to minimize the expense incurred for effecting portfolio transactions, to the extent consistent with the interests and policies of client accounts. However, the Advisers will not select broker-dealers solely on the basis of "posted" commission rates nor always seek in advance competitive bidding for the most favorable commission rate applicable to any particular transaction. Although the Advisers generally seek competitive commission rates, they will not necessarily pay the lowest commission or commission equivalent as transactions that involve specialized services on the part of a broker-dealer generally result in higher commission rates or equivalents than would be the case with more routine transactions. The Advisers may pay higher commission rates to those brokers whose execution abilities, brokerage or research services or other legitimate and appropriate services are particularly helpful in seeking good investment results and may consistent with applicable law and client consent, will use the services of PNC Broker-Dealers.

The reasonableness of commissions is based on an Adviser's view of the broker's ability to provide professional services, competitive commission rates, research and other services which will help an Adviser in providing investment advisory services to its clients, viewed in terms of either the particular transaction or the Adviser's overall responsibility to its clients, as the extent to which the commission rate or net price associated with a particular transaction reflects the value of services provided often cannot be readily determined. In making these determinations, the Adviser recognizes that some firms are better at executing some types of orders than others and it can be in the clients' best interests to use a broker whose commission rates are not the lowest but whose executions and other services the Adviser believes are likely to result in lower overall transaction costs or more favorable or more certain results.

As noted above, from time to time an Adviser places client transactions through an ECN or other electronic systems or ATS or with brokers or dealers that participate in such systems, including some in which BlackRock, from time to time and in accordance with applicable law, will have an ownership or financial interest. An Adviser uses these systems only when consistent with its relevant policies and procedures and the duty to seek best execution.

Unless inconsistent with the Adviser's duty to seek best execution, an Adviser at times directs a broker to execute a trade and "step out" a portion of the commission in favor of another broker that provides brokerage or research related services to BlackRock as described above. An Adviser also at times uses step out transactions in fulfilling a client-directed brokerage arrangement, to allow for an order to be aggregated, or for regulatory or other purposes. However, BlackRock does not enter into agreements with, or make commitments to, any broker-dealer that would bind BlackRock to compensate that broker-dealer, directly or indirectly, for client referrals or sales efforts through placement of brokerage transactions; nor will BlackRock use step out transactions or similar arrangements to compensate selling brokers for their sales efforts. The BlackRock US Funds have adopted procedures pursuant to Rule 12b-1(h) under the Investment Company Act which provide that neither the funds nor BlackRock are permitted to direct brokerage in recognition of the sale of fund shares. Consistent with those procedures, BlackRock does not consider sales of shares of BlackRock US Funds, as a factor in the selection of brokers or dealers to execute portfolio transactions. However, whether or not a particular broker or dealer sells shares of BlackRock US Funds neither qualifies nor disqualifies such broker or dealer to execute transactions for those mutual funds.

### ***Use of Commissions***

From time to time and consistent with applicable law and regulatory guidance, BlackRock Investment Advisers will select brokers (including, without limitation, PNC Broker-Dealers, unless prohibited by applicable law or contractual arrangements) that furnish BlackRock Investment Advisers and BlackRock Clients or their affiliates or personnel, directly or through third-party or correspondent relationships, with research or execution services that provide, in the BlackRock Investment Advisers' view, lawful and appropriate assistance in the investment decision-making or trade execution processes (including such processes with respect to futures, fixed-price offerings, and over-the-counter transactions). An Adviser might endeavor, subject to the duty to seek best execution, to execute trades with such brokers in order to obtain research or brokerage services. Research or brokerage services that can be acquired by BlackRock Investment Advisers with client commissions include, without limitation and to the extent permitted by applicable law: (i) research reports on companies, industries and securities; (ii) economic and financial data; (iii) financial publications; (iv) quantitative analytical software; and (v) market data related software and services. Such services will be either proprietary (i.e., created and provided by the broker-dealer) or third-party (created by a third-party but provided by the broker-dealer).

A BlackRock Investment Adviser could pay, or be deemed to have paid, commission rates higher than it could have otherwise paid in order to obtain such research or brokerage services. Such higher commissions would be paid in accordance with Section 28(e) of the Exchange Act as interpreted by the SEC and its staff, which requires the BlackRock Investment Adviser to determine in good faith that the commissions paid are reasonable in relation to the value of the research or brokerage services received. BlackRock believes that using commission dollars to obtain the type of research and brokerage services mentioned above enhances its investment research and trading processes. Research products or brokerage services received by a BlackRock Investment Adviser might also be used for functions that are not research or brokerage related. Where a research product or brokerage service has a mixed use, the BlackRock Investment Adviser will make a reasonable allocation according to its use and will pay for the non-research and brokerage function in cash using its own funds. The receipt of such products and services and the determination of the appropriate allocation create a potential conflict.

While research or brokerage services obtained in this manner can be used in servicing any or all of a BlackRock Investment Adviser's client accounts, such products and services tend to disproportionately benefit one or more clients relative to others based on the amount of brokerage commissions paid, the nature of the research or brokerage products and services acquired and their relative use or value for particular accounts. For example, in some cases, the research or brokerage services that are paid through a client's commissions might not be used in managing that client's account. In addition, other BlackRock Clients can receive the benefit, including disproportionate benefits, of economies of scale or price discounts in connection with products and services provided as a result of transactions executed on behalf of a client account for which such products and services are also used. To the extent that a BlackRock Investment Adviser uses client commission dollars to obtain research or brokerage services, it will not have to pay for those products and services itself.

BlackRock Investment Advisers can also receive research or brokerage services that are bundled with trade execution, clearing, settlement, and/or other services provided by a particular broker-dealer. To the extent a BlackRock Investment Adviser receives research or brokerage services on this basis, many of the same potential conflicts related to receipt of these services through third-party arrangements exist. For example, the research effectively will be paid by client commissions that also will be used to pay for the execution, clearing, and settlement services provided by the broker-dealer and will not be paid by the BlackRock Investment Adviser from its own assets.

***Access Fees Paid to, and Discounts Provided by, ECNs, Swap Clearing Firms and Other Trading Systems***

BlackRock also places orders for the purchase and sale of securities or other instructions for its clients through electronic trading systems or ATSS, including ECNs, swap clearing firms, or with brokers or dealers that participate in such trading systems or platforms, consistent with its duty to seek best execution of client transactions. ECNs and swap clearing firms charge fees for their services, including access fees and transaction fees. Access fees may be paid by BlackRock even though incurred in connection with executing transactions on behalf of clients, while transaction fees generally will be charged to clients and, like commissions and markups/markdowns, generally will be included in the cost of the securities purchased. In certain circumstances, ECNs and swap clearing firms offer volume discounts that will reduce the access fees typically paid by an investment adviser. BlackRock expects to qualify for these volume discounts, which have the effect of reducing the access fees paid by BlackRock. Volume discounts achieved by BlackRock may also benefit or be applied to other BlackRock affiliates or their clients.

BlackRock also, from time to time and in accordance with applicable law, makes a nominal equity investment in or financial arrangement with a trading system or enter into consulting and/or advisory relationships with such electronic trading systems in order to assist in the design and development of such systems. In addition, certain BlackRock employees or employees of affiliates serve as board members or advisory members of ECNs, swap clearing firms, and/or other trading systems. Although BlackRock will not accept any payment, commission, rebate, or other compensation that is based on its use of a trading system on behalf of its advisory clients, BlackRock's use of these trading systems would result in some benefit to the trading system and therefore would, in turn, indirectly benefit BlackRock as an investor or party with a financial interest in the trading system.

**COMPETING OR COMPLEMENTARY INVESTMENTS AND TRADE AGGREGATION**

In some circumstances, BlackRock Investment Advisers seek to buy or sell the same securities contemporaneously for multiple BlackRock Client accounts. Similarly, BlackRock Investment Advisers manage or advise accounts of BlackRock Clients that have investment objectives that are similar to those of other BlackRock Clients and/or seek to make investments in securities or other instruments in which BlackRock Clients invest. This will create potential conflicts and potential differences among different BlackRock Clients, particularly where there is limited availability or limited liquidity for those investments. BlackRock has developed policies and procedures that provide that it will seek to allocate investment opportunities and make purchase and sale decisions among all BlackRock Clients in a manner that it deems fair and equitable over time. Please see Item 11 ("Potential Conflicts Relating to Advisory Activities") of this Brochure for more information.

Although, in some instances, allocating orders among BlackRock Clients can create potential conflicts of interest because of the interests of members of the BlackRock Group or because BlackRock receives greater fees or compensation from certain BlackRock Clients, BlackRock Investment Advisers will not make allocation decisions based on such interests or greater fees or compensation. Notwithstanding the foregoing, and considering BlackRock's

policy to treat all eligible BlackRock Clients fairly and equitably over time, any particular allocation decision among accounts can be more or less advantageous to any one BlackRock Client or group of BlackRock Clients and certain allocations, to the extent consistent with BlackRock's fiduciary obligations, deviate from a pro rata basis among BlackRock Clients in order to address legal, tax, regulatory, fiduciary, risk management, and other considerations. In any given circumstance, BlackRock also will consider client guidelines, the source of the investment opportunity, the nature of the mandate, the timing of a given fund or account's closing, contractual obligations, the respective committed capital of the relevant BlackRock Clients, legal or regulatory requirements, and other considerations, as applicable.

For example, BlackRock Investment Advisers allocate investment opportunities among client accounts based upon the nature of the investment opportunity and an assessment of the appropriateness of that opportunity for a client's account, taking into consideration the various risk characteristics associated with the investment opportunity and the relative risk profiles of the client account ("allocation metrics"). The risks considered in determining the allocation metrics for a group of accounts include, without limitation; (i) the type of security being considered; (ii) the security-, issuer- and/or industry-specific risks; (iii) the actual or expected liquidity of the security; and (iv) current and expected concentrations and exposures. In certain cases, BlackRock Investment Advisers will determine that an investment opportunity or particular purchases or sales are appropriate for one or more BlackRock Clients or for the BlackRock Group, but not for other BlackRock Clients, or are appropriate for, or available to, BlackRock Clients but in different sizes, terms, or timing than is appropriate for other BlackRock Clients, or determine not to allocate to or purchase or sell for certain BlackRock Clients all investment transactions for which all BlackRock Clients may be eligible.

BlackRock Investment Advisers, in appropriate circumstances, will aggregate securities trades for a BlackRock Client with similar trades for other BlackRock Clients, but are not required to do so. In particular, a BlackRock Investment Adviser will determine not to aggregate transactions that relate to portfolio management decisions that are made independently for different accounts or if it determines that aggregation is not practicable, not required or inconsistent with, client direction. When transactions are aggregated and it is not possible, due to prevailing trading activity or otherwise, to receive the same price or execution on the entire volume of securities purchased or sold, the various prices will be averaged, in which case all participating accounts generally will be charged or credited with the average price. In addition, under certain circumstances, BlackRock Clients will not be charged the same commission or commission equivalent rates in connection with a bunched or aggregated order. The effect of the aggregation therefore, on some occasions could either advantage or disadvantage a particular BlackRock Client.

From time to time, aggregation will not be possible because a security is thinly traded or otherwise not able to be aggregated and allocated among all client accounts seeking the investment opportunity or a BlackRock client will be limited in, or precluded from, participating in an aggregated trade as a result of that BlackRock client's specific brokerage arrangements, as discussed above. In these cases, the BlackRock Investment Advisers generally will choose to allocate on a non-pro rata basis such as through random or rotational allocations among eligible accounts in such a manner as to reasonably assure that BlackRock Clients are treated fairly and equitably over time. Also, BlackRock Clients can become subject to threshold limitations on aggregate ownership interests in certain companies arising from statutory, regulatory or self-regulatory organization requirements, or company ownership restrictions (e.g., poison pills or other restrictions in organizational documents). In these circumstances, the BlackRock client will be competing for investment opportunities with other BlackRock clients. Similarly, some BlackRock clients will be limited or restricted in their ability to participate in certain initial public offerings pursuant to FINRA rules. This will result in client accounts not being able to fully participate, or to participate at all, in such opportunities.

From time to time, the Lending Agents of securities lending transactions may employ similar procedures with respect to aggregation. Each securities lending client of BlackRock participating in an aggregated loan will participate at the loan or rebate fee negotiated with the borrower for the entire loan. The Lending Agents' policy seeks to allocate loan opportunities in a manner that, over time, seeks to approximate the outcome of a pro rata allocation, taking into account which clients have been passed over for previous loan opportunities, which clients have the security available for loan (and the amount available for loan), each client's applicable legal, tax and credit restrictions, (if applicable) any restrictions imposed by the borrower, and constraints imposed by the client's custodian or sub-custodian or the relevant securities market.



In the event that portfolio managers for SMA program accounts and portfolio managers for institutional or investment company accounts submit trade orders for execution for the same securities at or about the same time, BlackRock will determine, based on trading volume, market conditions, and other appropriate factors, including the administrative overhead associated with effecting trades for SMA program accounts, the order in which such transactions will be entered. Factors considered typically include relative size of the transactions, liquidity, and trading volume of the securities or other instruments involved, and the length of time needed to complete the respective transactions. Taking into account these factors, BlackRock will seek to make such decisions in a manner designed to achieve overall fair and equitable treatment of all clients over time. Once the order in which transactions will be effected for a particular group has been determined, BlackRock may complete transactions for one group before commencing transactions for the other. Trades directed by a SMA client or attributable to client inflows or outflows, may be submitted for execution separate from trades associated with the management of the investment strategy of a specific SMA program. Thus, as discussed more below under “Directed Brokerage”, trades may be effected on behalf of non-SMA program accounts at a different time than the corresponding trades are effected on behalf of SMA program accounts, and SMA program account trades, as well as transactions for other directed brokerage clients, may “wait behind” block trades executed for BlackRock’s non-SMA program accounts (and trades for SMA program accounts with significant client-imposed investment restrictions may trade after block trades executed for other SMA program accounts without such restrictions). In such circumstances, these accounts may receive an execution price that varies from (and may be less favorable than) the price received by other accounts managed by BlackRock. In certain of such circumstances, the market price of those securities can rise or fall before an SMA program or directed brokerage account trade is executed (and, in certain circumstances, as a direct result of other trades placed by, or on the advice of, BlackRock), causing SMA program and directed brokerage clients to purchase the same securities at a higher price (or sell the same securities at a lower price) than BlackRock’s other clients.

Given all of the foregoing factors, the amount, timing, structuring, or terms of an investment by BlackRock clients will differ from, and performance can be lower than, investments and performance of other BlackRock clients, including those which provide greater fees or other compensation (including performance-based fees) to BlackRock Investment Advisers or are accounts in which members of the BlackRock Group have an interest. The offering documents of certain funds and accounts may include additional information about the allocation of investment opportunities, trade aggregation, and conflicts of interest generally, and include information about the allocation procedures and processes directly applicable to that fund or account.

## **DIRECTED BROKERAGE**

In certain circumstances, BlackRock accepts direction from clients or agrees to limitations with respect to BlackRock’s brokerage discretion as to which brokers or dealers are to be used in effecting transactions for client accounts. Since wrap fees paid by Private Investors and Dual Contract SMA Program clients typically only include commissions on equity transactions executed by a particular broker-dealer (MLPF&S in the case of Private Investors, and the Sponsor in the case of a Dual Contract SMA Program), BlackRock generally requires such clients to direct BlackRock to execute equity transactions at such broker-dealer. Other SMA program investment advisers may or may not require such direction from their clients.

Clients who direct BlackRock (or whose investment adviser or SMA program Sponsor directs BlackRock) to use a particular broker or dealer (the “Designated Broker”), or otherwise limit BlackRock’s brokerage discretion, should be aware that, this direction can limit BlackRock in obtaining volume discounts on aggregated orders, or in selecting brokers or dealers on the basis of best price and execution. In certain SMA programs where BlackRock is not directed to use a particular broker-dealer, BlackRock has discretion to select broker-dealers to fulfill its duty to seek best execution for its clients’ accounts. However, because brokerage commissions and other charges for equity transactions not effected through the Sponsor can be charged to the client, whereas the wrap fee generally covers the cost of brokerage commissions and other transaction fees on equity transactions effected through the Sponsor, it is likely that most, if not all, equity transactions for clients of such programs will be effected through the Sponsor. BlackRock generally does not monitor or evaluate the nature and quality of the services clients obtain from SMA program Sponsors or Designated Brokers and it is possible that Sponsor or Designated Brokers provide less advantageous execution of transactions than if BlackRock selected another broker-dealer to execute the transactions. Furthermore, if the Sponsor or Designated Broker is not on BlackRock’s approved list of brokers, the client could potentially be subject to additional counterparty credit and settlement risk. As a result, directed brokerage transactions

can result in less favorable execution on some transactions than would be the case if BlackRock was free to choose the broker or dealer, potentially resulting in increased costs to the client.

Moreover, clients who direct brokerage can have execution of their orders delayed, since (as discussed above) in certain instances BlackRock will fill directed trades after block trading activity is completed for a particular security. Orders for SMA program accounts, while generally aggregated with orders for other accounts within the same program that are employing the same investment strategy, typically are not aggregated with transactions for institutional or investment company accounts and can take more time to complete than those effected for institutional or investment company accounts. This is, among other things, because: (i) transactions for SMA program accounts involve substantially greater numbers of accounts than transactions for institutional or investment company accounts and therefore require the use of specialized trading systems to determine the quantity of securities being purchased or sold by each account and which record and confirm each transaction at the individual account level; and (ii) equity transactions for accounts in an SMA program typically are executed at one firm because either (a) BlackRock is directed to effect such transactions through a Designated Broker, or (b) the fees paid by clients to the program Sponsor typically only include commissions on equity transactions executed by the Designated Broker.

A client who participates in a wrap fee arrangement with an SMA program Sponsor should consider that, depending on the level of the wrap fee charged by the Sponsor, the amount of portfolio activity in the client's account, the value of the custodial and other services which are provided under the arrangement, and other factors, the wrap fee may or may not exceed the aggregate cost of such services if they were provided separately.

Non-wrap fee paying SMA program clients are solely responsible for their brokerage arrangements (including negotiating the commission rates payable by their accounts) and BlackRock will effect equity transactions through the client's Designated Broker at the commission rates or spreads agreed to by the client directly with the Designated Broker or at the Designated Broker's standard rate if no specific rate has been negotiated. Such rates may not be the lowest available rates and may not be as low as the rate BlackRock might have obtained if BlackRock had discretion to select the brokerage firm for the transaction.

## NON-DISCRETIONARY ACCOUNTS

If a client has retained a BlackRock Investment Adviser to manage an account on a non-discretionary basis ("Non-Discretionary Clients"), there is the potential for the Client to be disadvantaged because the BlackRock Investment Adviser generally must obtain the Non-Discretionary Client's approval prior to effecting investment transactions on their behalf (unless otherwise agreed to with the client). In some instances, Non-Discretionary Clients will not receive notification of proposed trades from the BlackRock Investment Adviser and/or will not provide consent to such trades until after BlackRock's discretionary accounts have finished trading. Therefore, Non-Discretionary Clients will not always benefit from aggregated or "bunched" orders, resulting in a delay in execution of orders, and resulting in their accounts receiving a price that potentially is less favorable than that obtained for discretionary accounts. In addition, in certain instances, Non-Discretionary Clients are precluded from participating in certain investment opportunities that are available to discretionary clients if BlackRock is unable to obtain the client's consent in a timely fashion. As a result of these and other factors, the performance of non-discretionary accounts can differ from (and be better or worse than) the performance of discretionary accounts following the same investment strategy.

As noted above in Item 4 ("Advisory Business") under "Advisory Services – Separately Managed Accounts," in certain SMA programs BIM provides non-discretionary investment services (often in the form of model portfolios) to a Sponsor or an OPM, who utilizes such model portfolios in connection with its management of program client accounts. The model portfolios provided to a Sponsor or OPM can, in some circumstances, reflect recommendations being made by BIM contemporaneously to, or investment advisory decisions made contemporaneously for, similarly situated discretionary clients of BIM. As a result, BIM may have already commenced trading before the Sponsor or OPM has received or had the opportunity to evaluate or act on BIM's model portfolios. In this circumstance, trades ultimately placed by the Sponsor or OPM for its clients may be subject to price movements, particularly with large orders or where the securities are thinly traded, that may result in the OPM's clients receiving prices that are less favorable than the prices obtained by BIM for its client accounts. On the other hand, the OPM may initiate trading based on BIM's model portfolios before or at the same time BIM is also trading for its own client accounts. Particularly with large orders or where the securities are thinly traded, this could result in BIM's clients receiving prices that are less favorable than prices that might otherwise have been obtained absent the Sponsor's or OPM's trading activity. BIM takes

reasonable steps to attempt to minimize the market impact of the recommendations provided to the Sponsor or OPM on accounts for which BIM exercises investment discretion. However, because BIM does not control the Sponsor's or OPM's execution of transactions for the Sponsor's or OPM's client accounts, BIM cannot affect the market impact of such transactions to the same extent that it is able to for its discretionary client accounts.

A BlackRock Investment Adviser may also provide due diligence support to BlackRock Clients on a non-discretionary basis for investment opportunities brought by such BlackRock Client to the BlackRock Investment Adviser. Typically, the investments for which due diligence support is provided will not be available for allocation to other BlackRock Clients.

#### **CHANGES TO BLACKROCK'S BROKERAGE ARRANGEMENTS**

A BlackRock Investment Adviser may choose, from time to time, to alter or not to engage in the above described arrangements to varying degrees, without notice to BlackRock Clients, to the extent permitted by applicable law and the applicable client agreement.

## Item 13 Review of Accounts

BlackRock periodically reviews client accounts and provides reports to clients regarding their accounts. The nature and frequency of these reviews, as well as the frequency and content of these reports, is discussed in more detail below.

### **NATURE AND FREQUENCY OF CLIENT ACCOUNT REVIEW**

Depending on the nature of an institutional client's portfolio, the client's own monitoring capabilities, the type of advice and the arrangements made with the client, BlackRock's frequency of client account reviews ranges from daily to quarterly. The level of review can encompass the client's portfolio, a section of the portfolio, or a specific transaction or investment. Additional reviews can be triggered by changes in the investment objectives or guidelines of a particular client or specific arrangements with particular clients. The frequency, depth, and nature of reviews are often determined by negotiation with individual clients pursuant to the terms of each client's written IMA or by the mandate selected by the client and the particular needs of each client. Reviews typically are conducted by portfolio management and account management personnel. BlackRock holds periodic staff meetings to determine the timing, level and focus of specific client reviews and to review the appropriateness of the review already completed.

Private Investors and other SMA program accounts (and related Model Guidelines and target portfolios) are reviewed on an ongoing basis by BlackRock. Reviews are conducted with the help of computer support systems on an account-by-account basis and on security-holdings and performance-exception basis. Reviews are conducted to determine if an account's holdings are consistent with the client's selected investment strategy and restrictions imposed by the client. In addition to the assigned portfolio management team, certain representatives of BlackRock's risk management groups periodically spot check accounts and target portfolios to review performance and relevant investment guidelines.

### **FREQUENCY AND CONTENT OF CLIENT ACCOUNT REPORTS**

The frequency and content of reports for institutional clients vary according to the particular needs of each client and the agreement between the client and Adviser. Such reports generally contain information with respect to portfolio holdings, transactions, and performance. Reporting for SMA program clients varies according to the service or program in which the client is enrolled. Private Investors clients typically receive a quarterly account performance report. Clients in SMA programs sponsored by other firms should contact the Sponsors for information regarding reports provided to their program clients.

## Item 14 Client Referrals and Other Compensation

### **PAYMENTS TO BLACKROCK BY A NON-CLIENT IN CONNECTION WITH ADVICE PROVIDED TO A CLIENT**

Certain retirement and/or pension plan Sponsors will pay management fees in connection with advice provided by BlackRock to such plan directly to BlackRock instead of having the management fee deducted from the retirement or pension plan assets.

### **SOLICITATION, INTRODUCTION OR PLACEMENT ARRANGEMENTS**

From time to time, BlackRock compensates certain affiliated and unaffiliated persons or entities (e.g., MLPF&S, UBS Financial Services Inc., Winklevoss, LLC) for client referrals or introductions to BlackRock or placements of interests in Private Funds, in compliance with applicable law, including circumstances where, in connection with discrete advisory transactions, BlackRock or an affiliate will pay or split a portion of the fees with an unaffiliated third-party for assisting in obtaining a specific client. The material terms of such arrangements will be disclosed to relevant clients or investors. BlackRock informs each Private Fund investor that is the subject of such placement services that the third-party placement agent will be compensated by the investor, the Private Fund or BlackRock, as the case may be. The name of the third-party providing the services also is disclosed to each relevant Private Fund investor, along with the nature of any affiliation between the third-party and BlackRock. From time to time, investors also will be introduced to a Private Fund by the Private Fund's prime broker. Because an increase in the size of a Private Fund would likely result in additional compensation to the prime broker, the prime broker receives a benefit from such introductions.

BlackRock and its affiliates also serve as authorized participants or participating dealers in the creation and redemption of ETFs, including funds advised by BlackRock and certain affiliates therefore will be deemed to be participants in a distribution of such ETFs, which could render them statutory underwriters.

With respect to client solicitation arrangements, the Advisers Act requires that, among other things, compensation to a solicitor be made pursuant to a written agreement and, for third-party solicitor arrangements, that the solicitor provide to each person solicited for BlackRock's advisory services, a written disclosure statement (the "Solicitor's Disclosure Statement") and this Brochure (or alternate brochure required or permitted to be provided, such as the Private Investors Brochure). The Solicitor's Disclosure Statement contains important information with respect to, among other things, the material terms of the solicitor's compensation from BlackRock, the nature of any relationship or affiliation between the solicitor and BlackRock, whether the client bears any costs with respect to the solicitation and whether the fees paid by such a client may differ from fees paid by other similarly situated clients who are not so introduced, as a result of the solicitation, and these Solicitor's Disclosure Statements should be reviewed carefully by prospective clients.

From time to time and consistent with BlackRock policy and applicable regulation, BlackRock also pays for, or reimburses broker-dealers to cover, various costs arising from, or activities that may result in, the sale of advisory products or services, including: (i) client and prospective client meetings and entertainment; (ii) sales and marketing materials; (iii) educational and training meetings or entertainment activities with the registered representatives of such broker-dealers and other personnel from entities that distribute BlackRock's products and/or services; and (iv) charitable donations in connection with events involving personnel or clients of entities that distribute BlackRock's products and/or services.

### **SOLICITATIONS BY MLPF&S OR ITS EMPLOYEES**

Merrill Lynch Financial Advisors and/or other employees of MLPF&S typically receive compensation from BlackRock in the form of solicitation fees for referring Private Investors and other clients to BlackRock. A description of such compensation and other relevant information pertaining to the solicitation arrangement is contained in MLPF&S' Solicitor's Disclosure Statement. Merrill Lynch Financial Advisors and/or other employees of MLPF&S also may receive compensation from MLPF&S based on the commissions paid by Private Investors clients in connection with transactions executed by MLPF&S. Such clients may have materially different commission rate schedules with MLPF&S, even though their Private Investors accounts may be following the same investment strategy and/or may have substantially similar trading patterns. Therefore, Private Investors clients who pay commissions on trades should



## **Item 14 Client Referrals and Other Compensation**

contact their Merrill Lynch Financial Advisor or sales representative to discuss and/or negotiate the commission rates payable by their accounts. The amount of compensation paid to MLPF&S employees whose clients retain BlackRock to manage their assets and pay a wrap fee may be more than what the employees would receive if the clients had paid separately for advisory, brokerage and other services. Therefore, MLPF&S employees may have a financial incentive to recommend certain services or programs over other services or programs.

## Item 15 Custody

BlackRock generally does not have actual custody of its clients' assets. However, based on SEC guidance, BlackRock may be deemed to have custody of its clients' assets including, without limitation, because certain clients authorize BlackRock to receive its advisory fees out of the assets in such clients' accounts by sending invoices to the respective custodians of those accounts. Such clients generally will receive account statements directly from their third-party custodians for the accounts and should carefully review these statements. Such clients should contact BlackRock immediately if they do not receive account statements from their custodian on at least a quarterly basis. As noted in Item 13 ("Review of Accounts") of this Brochure, the frequency and content of reports provided by BlackRock to clients vary according to the particular needs of each client and the agreement between the client and the Adviser. Clients should compare any reports provided by BlackRock with the account statements received from the custodian. If clients discover any discrepancy between the account statement provided by BlackRock and the account statement provided by the custodian, then they should contact BlackRock immediately.

BlackRock also could be deemed to have custody of certain Private Funds advised by an Adviser for which it or an affiliate serves as managing member or general partner. In addition, BlackRock may be deemed to have custody of certain aggregating vehicles for which an Adviser or an affiliate serves as managing member or general partner and through which certain clients (including Private Funds and SMA clients) make one or more investments. Investors in such Private Funds or aggregating vehicles generally will receive the vehicle's annual audited financial statements. Such investors should review these statements carefully. If investors in the Private Funds or aggregating vehicles do not receive audited financial statements in a timely manner (120 days for most Private Funds and aggregating vehicles and 180 days for Private Funds that are Funds of Funds), then they should contact BlackRock immediately.

To the extent that a Private Fund or aggregating vehicle for which BlackRock is deemed to have custody does not provide investors with its annual financial statements as described above, such investors will instead receive quarterly account statements from the qualified custodian of such Private Fund or aggregating vehicle and should contact BlackRock immediately if they fail to receive such account statements.

## **Item 16 Investment Discretion**

As a general rule, each Adviser receives discretionary (or non-discretionary) investment authority from its clients at the outset of an advisory relationship. Depending on the terms of the applicable IMA, the Adviser's authority could include the ability to select brokers and dealers through which to execute transactions on behalf of its clients, and to negotiate the commission rates, if any, at which transactions are effected. In making decisions as to which securities are to be bought or sold and the amounts thereof, each Adviser is guided by the mandate selected by the client and any client-imposed guidelines or restrictions. Unless the Adviser and the client have entered into a non-discretionary arrangement, the Adviser generally is not required to provide notice to, consult with, or seek the consent of its clients prior to engaging in transactions. Please see Item 12 ("Brokerage Practices") of this Brochure for more information.

## Item 17 Voting Client Securities

US Registered Funds and certain Private Funds managed by BlackRock have delegated the authority to vote proxies to BlackRock. From time to time, institutional, SMA program, and other clients will give BlackRock or its designee the authority to vote proxies relating to securities held in their accounts by granting such authority in IMAs. Consistent with applicable rules under the Advisers Act, BlackRock has adopted and implemented written proxy voting policies and procedures (“Proxy Voting Guidelines”) that are reasonably designed: (i) to vote proxies, consistent with its fiduciary obligations, in the best interests of clients; and (ii) to prevent conflicts of interest from influencing proxy voting decisions made on behalf of clients. Nevertheless, when votes are cast in accordance with the Proxy Voting Guidelines and in a manner that BlackRock believes to be consistent with its fiduciary obligations, actual proxy voting decisions made on behalf of one client can have the effect of favoring or harming the interests of other clients, BlackRock, or its affiliates.

BlackRock provides proxy voting services as part of its investment management service to client accounts and does not separately charge a fee for this service. This function is executed by a team of dedicated BlackRock employees without sales responsibilities (the “Investment Stewardship Group”), which is considered an investment function. BlackRock maintains oversight committees (“Investment Stewardship Committees”) comprising senior BlackRock investment professionals for the following regions: Americas; Europe; Middle East and Africa; Asia Pacific; and Global. The Investment Stewardship Committees review and approve amendments to BlackRock’s proxy voting guidelines (the “Guidelines”) and grant authority to the Global Head of Corporate Governance (“Global Head”), a dedicated BlackRock employee without sales responsibilities, to vote in accordance with the Guidelines. The Global Head leads the Investment Stewardship Group to carry out engagement, voting, and vote operations in a manner consistent with the relevant Corporate Governance Committee’s mandate. In conjunction with portfolio managers, the Investment Stewardship Group engages companies in discussions of significant governance issues, conducts research on corporate governance issues and participates in industry discussions to keep abreast of the field of corporate governance. The Investment Stewardship Group, or vendors overseen by the Investment Stewardship Group, also monitor upcoming proxy votes, execute proxy votes and maintain records of votes cast. The Investment Stewardship Group has adopted policies and procedures to provide ongoing oversight of any vendors used to vote proxies in the best interest of clients. The Investment Stewardship Group will refer complicated or particularly controversial matters or discussions to the appropriate investors and/or regional Investment Stewardship Committees for their review, discussion, and guidance prior to making a voting decision. BlackRock’s Equity Policy Oversight Committee (“EPOC”) oversees certain aspects of the Global Corporate Governance Committee and the Investment Stewardship Group’s activities.

BlackRock votes (or refrains from voting) proxies for each client for which it has voting authority based on BlackRock’s evaluation of the best long-term economic interests of shareholders, in the exercise of its independent business judgment, and without regard to the relationship of the issuer of the proxy (or any dissident shareholder) to the client, the client’s affiliates (if any), BlackRock, or BlackRock’s affiliates.

When exercising voting rights, BlackRock will normally vote on specific proxy issues in accordance with the Guidelines for the relevant market. The Guidelines are reviewed regularly and are amended consistent with changes in the local market practice, as developments in corporate governance occur, or as otherwise deemed advisable by BlackRock’s Investment Stewardship Committees. From time to time, the Investment Stewardship Committees, in the exercise of their business judgment, will conclude that the Guidelines do not cover the specific matter upon which a proxy vote is requested or that an exception to the Guidelines would be in the best long-term economic interests of BlackRock’s Clients.

In certain markets, proxy voting involves logistical issues which can affect BlackRock’s ability to vote such proxies, as well as the desirability of voting such proxies. These issues include but are not limited to: (i) untimely notice of, shareholder meetings; (ii) restrictions on a foreigner’s ability to exercise votes; (iii) requirements to vote proxies in person; (iv) “share blocking” (requirements that investors who exercise their voting rights surrender the right to dispose of their holdings for some specified period in proximity to the shareholder meeting); (v) potential difficulties in translating the proxy; (vi) requirements to provide local agents with unrestricted powers of attorney to facilitate voting instructions; and (vii) regulatory threshold constraints.

As a consequence, BlackRock votes proxies only on a “best-efforts” basis. In addition, the Investment Stewardship Committees may in some circumstances determine that it is generally in the best interests of BlackRock Clients not to vote proxies if the committee determines that the costs (including but not limited to opportunity costs associated with share blocking constraints) associated with exercising a vote are expected to outweigh the benefit the client will derive by voting on the issuer’s proposal.

While it is expected that BlackRock, as a fiduciary, generally will seek to vote proxies over which BlackRock exercises voting authority in a uniform manner for all BlackRock Clients, in certain circumstances, the portfolio manager of an account, in consultation with the Investment Stewardship Group, will determine that the specific circumstances of an account require that account’s proxies be voted differently due to such account’s investment objective or other factors that differentiate it from other accounts. In addition, BlackRock believes portfolio managers from time to time legitimately will reach differing but equally valid views, for their funds and the client assets in those funds, on how best to maximize economic value in respect of a particular investment. Accordingly, portfolio managers retain full discretion to vote the shares in the accounts they manage based on their analysis of the economic impact of a particular ballot item.

BlackRock maintains policies and procedures that are designed to prevent undue influence on BlackRock’s proxy voting activity that might stem from any relationship between the issuer of a proxy (or any dissident shareholder) and BlackRock, BlackRock’s affiliates, a fund or a fund’s affiliates. BlackRock manages most conflicts through the structural separation of the Investment Stewardship Group from employees with sales responsibilities. In certain instances, BlackRock will determine to engage an independent fiduciary to vote proxies as a further safeguard to avoid potential conflicts of interest or as otherwise required by applicable law. The independent fiduciary either will vote such proxies, or provide BlackRock with instructions as to how to vote such proxies. In the latter case, BlackRock votes the proxy in accordance with the independent fiduciary’s determination. Use of an independent fiduciary has been adopted for voting the proxies related to any company that is affiliated with BlackRock, or any company that includes BlackRock employees on its board of directors.

BlackRock Alternative Advisors (“BAA”), a business unit of BlackRock, Inc., maintains proxy voting policies and procedures applicable to its specific business separate from the proxy voting policies and procedures applicable to other BlackRock business units and the Investment Stewardship Group. BAA clients, upon request, will receive a copy of the BAA Proxy Voting Policies and Procedures and a tabulation of how such client’s proxies were voted by BAA. Contact [BAA-ClientAccountRelations@blackrock.com](mailto:BAA-ClientAccountRelations@blackrock.com) to request such information.

Clients that have not granted BlackRock voting authority over securities held in their accounts will receive their proxies in accordance with the arrangements they have made with their service providers. BlackRock generally does not provide proxy voting recommendations to clients who have not granted BlackRock voting authority over their securities.

With regard to the relationship between securities lending and proxy voting, BlackRock’s approach is driven by its clients’ economic interests. The evaluation of the economic desirability of voting proxies for securities that are on loan involves balancing the likely economic significance of voting those securities against the revenue-producing value of the loan. Based on BlackRock’s evaluation of this relationship, we believe that generally the likely value of casting most votes is less than the securities lending income, either because the votes will not have significant economic consequences or because the outcome of the vote would not be affected by the Adviser recalling loaned securities in order to ensure they are voted. In certain instances however, BlackRock in its discretion will determine that the value of voting outweighs the cost of recalling shares, and thus recall shares to vote in that instance.

BlackRock will provide clients, upon request, a copy of the Proxy Voting Guidelines, which is also available at: <http://www.blackrock.com/corporate/en-us/about-us/investment-stewardship/voting-guidelines-reports-position-papers> - (“Global Corporate Governance Guidelines & Engagement Principles”). BlackRock also will provide clients, upon request, information regarding how BlackRock voted their proxies. Except with respect to U.S. Private Funds and Sub-Advised Funds where disclosure is mandated by SEC rules, BlackRock will not disclose how it voted for a client to third-parties, unless specifically requested, in writing, by the client. However, where BlackRock serves as a sub-adviser to another adviser to a client, BlackRock will be deemed to be authorized to provide proxy voting records



with respect to such accounts to that adviser. In addition, information on how BlackRock voted proxies for certain BlackRock US Funds can be found at:

<http://www.blackrock.com/corporate/en-us/about-us/investment-stewardship/voting-guidelines-reports-position-papers> - (Reports - "Proxy Voting History").

## Item 18 Financial Information

Not Applicable

## GLOSSARY

ABR Re – ABR Reinsurance Capital Holdings Ltd. and its subsidiary ABR Reinsurance Ltd.

ABR Re Transaction – BlackRock, Inc. and Chubb Limited (“Chubb”) partial funding of the creation of ABR Reinsurance Capital Holdings Ltd., together with its wholly owned subsidiary ABR Reinsurance Ltd.

Advisers – Wholly-owned direct and indirect subsidiaries of BlackRock, Inc., registered as investment advisers with the SEC (Listed on Page 1 of this Brochure).

Advisers Act – Investment Advisers Act of 1940, as amended

Affiliated Accounts – Portfolios managed by BlackRock Investment Advisers

Affiliated Funds – “US Registered Funds” or other pooled investment vehicles (including Private Funds) for which BlackRock Investment Advisers serve as investment adviser or sub-adviser collectively

AIFMD – European Union’s Alternative Investment Fund Managers Directive

ATS – Alternative Trading System

BAA – BlackRock Alternative Advisors, a business unit of BlackRock, Inc.

BAL – BlackRock Advisors, LLC

BALUK – BlackRock Advisors (UK) Limited

BAMNAL – BlackRock Asset Management North Asia Limited

BAMS – BlackRock Asset Management Schweiz AG

BCM – BlackRock Capital Management, Inc.

BES – BlackRock Execution Services

BFA – BlackRock Fund Advisors

BFM – BlackRock Financial Management, Inc.

BIL – BlackRock International Limited

BIM – BlackRock Investment Management, LLC

BIS – BlackRock Index Services, LLC

BIS Index – Index developed by BlackRock Index Services, LLC

BlackRock – BlackRock, Inc. together with its subsidiaries

BlackRock Australia – BlackRock Investment Management (Australia) Limited

BlackRock Clients – Investment management clients of BlackRock, Inc. and its subsidiaries

BlackRock Group – Collectively, BlackRock and its directors, managers, members, officers, and employees

BlackRock Investment Advisers – The various investment advisory and trust company subsidiaries of BlackRock, Inc.

BlackRock Japan – BlackRock Japan Co., Ltd.

BlackRock Realty – BlackRock Realty Advisors, Inc.

BlackRock US Funds – the BlackRock Equity-Bond Complex (consisting of various open-end mutual funds, including variable insurance funds), the BlackRock Closed-End Complex (consisting principally of publicly traded closed-end investment companies), the US iShares Complex (consisting of open-ended investment companies commonly referred to as ETFs, which trade in the secondary market,) and the BlackRock Equity-Liquidity Complex (consisting of various open-end investment companies, including money market funds serving the institutional and retail market)

BRIL – BlackRock Investments, LLC

BRS – BlackRock Solutions®

BSL – BlackRock (Singapore) Limited

BTC – BlackRock Institutional Trust Company, N.A.

CEA – The Commodity Exchange Act

CFTC – U.S. Commodities Futures Trading Commission

Chubb – Chubb Limited

CMG – BlackRock's Cash Management Group

Code – Collectively, BlackRock Global Personal Trading Policy and BlackRock's Code of Business Conduct and Ethics

Dodd-Frank – Dodd-Frank Wall Street Reform and Consumer Protection Act

DOL – U.S. Department of Labor

Designated Broker – A particular broker or dealer BlackRock has been directed to use by a client, the client's investment adviser or SMA program Sponsor

DSP India – DSP BlackRock Investment Managers Private Limited

ECN – Electronic Communication Network

EPOC – BlackRock's Equity Policy Oversight Committee

ERISA – Employee Retirement Income Security Act of 1974, as amended

ETFs – Exchange traded funds

EU – European Union

Exchange Act – The Securities Exchange Act of 1934, as amended

Fair Value Assets – Assets for which are valued by BlackRock in accordance with BlackRock's valuation procedures or, when held in a BlackRock-sponsored registered investment company, in accordance with valuation and liquidity procedures approved by the investment company's board of directors.

FINRA – The Financial Industry Regulatory Authority

FMA – BlackRock's Financial Markets Advisory Group

Foreign iShares ETFs – BlackRock's exchange traded funds domiciled outside of the U.S. that are managed by a BlackRock Investment Adviser domiciled outside of the U.S.

Funds of Funds – Funds that invest primarily in other affiliated or unaffiliated investment vehicles

Guidelines – BlackRock's proxy voting guidelines

GVMC – BlackRock's Global Valuation Methodologies Committee

iCapital – iCapital Networks

IMA – Investment Management Agreement

Index Portfolio – A portfolio whose investment objective is to achieve investment results, before fees and expenses that correspond generally to the total return performance of a particular index.

Investment Company Act – The Investment Company Act of 1940, as amended

Investment Consultants – Pension or other institutional investment consultants

Investment Group – BlackRock's Investment Group

Investor – A particular investor in a Private Fund

IRC – Internal Revenue Code of 1986, as amended

iShares ETFs – U.S. and non-U.S. exchange traded funds managed by a BlackRock Investment Adviser

Lending Agents – Subsidiaries of BlackRock, Inc. that act as securities lending agents

Luminex – Luminex Trading & Analytics LLC

Management Fee-Waived Mutual Funds – Certain US Registered Funds in which BIM (or certain of its affiliates) may invest separate accounts, that do not charge management fees (or their fees are waived or reimbursed by the Fund's investment manager), and/or are only eligible for investment by separate accounts managed by BlackRock

MLPF&S – Merrill Lynch, Pierce, Fenner & Smith Incorporated

MPS – Minority Passive Shareholder

NFA – National Futures Association

Non-PI SMA Programs – Separately managed account programs not sponsored by BlackRock

NYSE – New York Stock Exchange

OM – Offering Memorandum

OPM – Overlay portfolio manager

Operating Events – Trade errors and other operational mistakes made in connection with an Adviser's management of funds and client accounts

PAC – Political Action Committee

PFSI – PennyMac Financial Services, Inc.

Private Investors Brochure – Disclosure document which BlackRock Investment Management, LLC makes available to current and prospective Private Investors clients.

Plans – Plans under Rule 12b-1 under the Investment Company Act

PNC – The PNC Financial Services Group, Inc., together with its subsidiaries

PNC Affiliates – PNC and its other affiliates, directors, partners, trustees, managers, members, officers, and employees collectively

PNC Broker-Dealers – Subsidiaries of PNC that are registered broker-dealers

PNMAC – Private National Mortgage Acceptance Company, LLC



Private Fund – Unregistered pooled investment vehicles advised by an Adviser and not registered with the SEC pursuant to exemptions under applicable securities

Private Investors – An SMA or wrap fee program sponsored by BIM

Relying Advisers – First Reserve Energy Infrastructure Advisors, L.L.C. and First Reserve Advisors, L.L.C.,

RQA – BlackRock’s Risk & Quantitative Analysis Group

Rules – Collectively, Rule 17j-1 under the Investment Company Act and Rule 204A-1 under the Advisers Act

Service Clients – Various clients for which the BlackRock Group and/or PNC Affiliates provide a variety of services and advice (including investment banking services, fairness opinions and extensions of credit provided by PNC).

SEC – U.S. Securities and Exchange Commission

Securities Act – The Securities Act of 1933, as amended

SMA – Separately managed account

Standard Fee Option – A fee arrangement for clients of Private, under which clients pay brokerage commissions associated with trades executed on their behalf in addition to the Private Investors fee

Sub-Advised Funds – Third-party funds registered under the Investment Company Act and sub-advised by an Adviser

Systems – Trading, portfolio management, operations and/or information systems which BlackRock or its affiliates own or have an ownership interest.

TRIM – BlackRock’s Transition Management

Underlying Index – A particular index that a portfolio’s investment objective is to obtain investment results, before fees and expenses, which correspond generally to the price and yield performance of the index.

U.S. – United States

U.S. Persons – Persons as defined under Regulation S of the Securities Act of 1933.

US iShares ETF Complex – BlackRock’s exchange traded registered investment companies advised by BFA that are listed to trade in the secondary market.

US iShares ETF – BlackRock’s exchange traded registered investment companies which are part of the US iShares ETF Complex

US Registered Funds – BlackRock’s proprietary funds registered under the Investment Company Act, together with the “Sub-Advised Funds”

VOC – BlackRock’s Valuation Oversight Committee

Wrap Fee Option – A wrap fee arrangement for clients of Private Investors, where brokerage commissions related to agency equity trades executed through MLPF&S generally are included in the Private Investors fee

## BlackRock Privacy Principles

The following Privacy Principles govern how BlackRock handles, safeguards and protects non-public personal information as defined by applicable local laws and regulations (“personally identifiable information / PII”).

1. BlackRock is committed to maintaining the privacy of individuals whose PII is held at BlackRock including current and former individual clients (whether invested in funds or otherwise) and other intermediaries with whom we conduct business.
2. BlackRock obtains or verifies PII from different sources, including the following:
  - Directly from Individuals;
  - From financial intermediaries;
  - Information provided in applications, forms or other documents;
  - Information BlackRock receives from a consumer reporting agency;
  - Information collected when an individual visits BlackRock’s websites.

Specifically, BlackRock is committed to the following:

- Obtaining PII fairly and lawfully;
  - Handling PII fairly and lawfully in accordance with the Individual’s rights;
  - Keeping PII accurate and up to date; and
  - Protecting PII from unlawful disclosure;
  - Retaining PII only for as long as is necessary.
3. BlackRock does not sell PII or disclose PII about Individuals to unaffiliated third parties, except as may be required by law, or to service client accounts (as allowed by law in the relevant jurisdiction), or with the Individual’s express consent. If PII is provided to a third party, such third party is required to protect the confidentiality and security of this information and to use it only for its intended purpose.
  4. BlackRock may be required to disclose PII in response to lawful requests by public and regulatory authorities, including to meet national security or law enforcement requirements.
  5. BlackRock may share PII with its affiliates to service a client’s account. BlackRock may directly or through service providers use PII to provide clients with information about other products or services of BlackRock that may be of interest to them, except where local laws or client contracts prohibit such sharing.
  6. BlackRock restricts access to PII to those BlackRock employees with a legitimate business need for the information.
  7. BlackRock maintains physical, electronic and procedural safeguards that are designed to protect PII, including procedures relating to the proper storage and disposal of such information.

Individuals may contact BlackRock at any time to confirm, update or verify the PII held by BlackRock or to confirm, update or verify the purposes for which that PII may be used.